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TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	4	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	5	MAR 02	GBFULL: New full-text patent database on STN
NEWS	6	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	8	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	9	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	10	MAR 22	PATDPASPC - New patent database available
NEWS	11	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	12	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	13	APR 04	EMBASE - Database reloaded and enhanced
NEWS	14	APR 18	New CAS Information Use Policies available online
NEWS	15	APR 25	Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS	16	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS
NEWS	17	MAY 23	GBFULL enhanced with patent drawing images
NEWS	18	MAY 23	REGISTRY has been enhanced with source information from CHEMCATS
NEWS	19	JUN 06	STN Patent Forums to be held in June 2005
NEWS	20	JUN 06	The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available
NEWS	21	JUN 13	RUSSIAPAT: New full-text patent database on STN
NEWS	22	JUN 13	FRFULL enhanced with patent drawing images
NEWS	23	JUN 20	MEDICONF to be removed from STN
NEWS	24	JUN 27	MARPAT displays enhanced with expanded G-group definitions and text labels
NEWS EXPRESS			JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 JUN 2005 HIGHEST RN 853295-05-3

DICTIONARY FILE UPDATES: 29 JUN 2005 HIGHEST RN 853295-05-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> e ethylene glycol/cn

E1	1	ETHYLENE GERMANATE(IV)/CN
E2	1	ETHYLENE GLYCOL-MAGNESIUM BIS(2-HYDROXYETHYL PHTHALATE)-MALE IC ANHYDRIDE-PHTHALIC ANHYDRIDE-PROPYLENE GLYCOL POLYMER/CN
E3	1 -->	ETHYLENE GLYCOL/CN
E4	1	ETHYLENE GLYCOL (13C2H6O2)/CN
E5	1	ETHYLENE GLYCOL (2,4,5-TRICHLOROPHENOXY)ACETATE/CN
E6	1	ETHYLENE GLYCOL (2-CHLORO-4-AMINOPHENYL) ETHER SULFURIC ACID ESTER/CN
E7	1	ETHYLENE GLYCOL (3-CHLORO-4-AMINOPHENYL) ETHER SULFURIC ACID ESTERS/CN
E8	1	ETHYLENE GLYCOL (3-METHYL-4-AMINOPHENYL) ETHER SULFURIC ACID ESTER/CN
E9	1	ETHYLENE GLYCOL A,A-DIHYDROPERFLUOROBUTYL ETHER/

E10 1 CN
 ETHYLENE GLYCOL A,A-DIHYDROPERFLUOROCTYL ETHER/
 CN
 E11 1 ETHYLENE GLYCOL A-D-GLUCOPYRANOSIDE/CN
 E12 1 ETHYLENE GLYCOL 1,1,7-TRIHYDROPERFLUOROHEPTYL ETHER/CN

=> e3

L1 1 "ETHYLENE GLYCOL"/CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 107-21-1 REGISTRY

ED Entered STN: 16 Nov 1984

CN 1,2-Ethanediol (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Ethylene glycol (8CI)**

CN Glycol (6CI, 7CI)

OTHER NAMES:

CN 1,2-Dihydroxyethane

CN 1,2-Ethylene glycol

CN 146AR

CN 2-Hydroxyethanol

CN Dowtherm SR 1

CN E 600

CN E 600 (glycol)

CN Ethylene alcohol

CN Ethylene dihydrate

CN Fridex

CN Glycol alcohol

CN Glysil GS

CN Macrogol 400 BPC

CN MEG 100

CN Monoethylene glycol

CN Norkool

CN NSC 93876

CN Ramp

CN Tescol

CN Ucar 17

CN Union Carbide XL 54 Type I De-icing Fluid

CN Zerex

FS 3D CONCORD

DR 37221-95-7, 71767-64-1

MF C2 H6 O2

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

HO-CH₂-CH₂-OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

43579 REFERENCES IN FILE CA (1907 TO DATE)
4390 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
43666 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e hydroxyacetic acid/cn

E1	1	HYDROXYACETATE ANION/CN
E2	1	HYDROXYACETHYDRAZIDE/CN
E3	1	--> HYDROXYACETIC ACID/CN
E4	1	HYDROXYACETIC ACID AMMONIUM SALT/CN
E5	1	HYDROXYACETIC ACID DILITHIUM SALT/CN
E6	1	HYDROXYACETIC ACID DIPOTASSIUM SALT/CN
E7	1	HYDROXYACETIC ACID DISODIUM SALT/CN
E8	1	HYDROXYACETIC ACID HOMOPOLYMER/CN
E9	1	HYDROXYACETIC ACID HOMOPOLYMER, SRU/CN
E10	1	HYDROXYACETIC ACID HYDRAZIDE/CN
E11	1	HYDROXYACETIC ACID METHYL ESTER/CN
E12	1	HYDROXYACETIC ACID N-METHYLANILIDE/CN

=> e3

L2 1 "HYDROXYACETIC ACID"/CN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 79-14-1 REGISTRY

ED Entered STN: 16 Nov 1984

CN Acetic acid, hydroxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Glycolic acid (7CI, 8CI)

OTHER NAMES:

CN α -Hydroxyacetic acid

CN 2-Hydroxyacetic acid

CN Glycocide

CN GlyPure

CN GlyPure 70

CN **Hydroxyacetic acid**

CN Hydroxyethanoic acid

CN NSC 166

FS 3D CONCORD

DR 702627-33-6, 259744-22-4

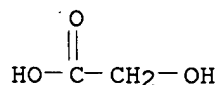
MF C2 H4 O3

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

8746 REFERENCES IN FILE CA (1907 TO DATE)
869 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8762 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

13.74

13.95

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005

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FILE COVERS 1907 - 30 Jun 2005 VOL 143 ISS 1

FILE LAST UPDATED: 29 Jun 2005 (20050629/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> 11/rct

43666 L1

2746350 RCT/RL

L3 8885 L1/RCT

(L1 (L) RCT/RL)

=> 12/prep

8762 L2

3323638 PREP/RL

L4 639 L2/PREP

(L2 (L) PREP/RL)

=> 13 and 14

L5 45 L3 AND L4

=> d 15 35-45 ti

L5 ANSWER 35 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Liquid-phase oxidation of ethylene glycol on a platinum-on-carbon catalyst. II. Kinetic studies

L5 ANSWER 36 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Transition metal oxide anodes and their application in the synthesis of organic compounds

L5 ANSWER 37 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Removal of sulfate from glycolic acid

L5 ANSWER 38 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Microbial production of glycolic acid

L5 ANSWER 39 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Studies on the electrochemical behavior of ethyleneglycol and its oxidized derivatives at platinum electrodes, VI. Oxidation of ethyleneglycol

L5 ANSWER 40 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Aldehydes, ketones, and fatty acids by oxidation of aliphatic alcohols or glycols

L5 ANSWER 41 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hydroxyacetic acid

L5 ANSWER 42 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hydroxyacetic acid

L5 ANSWER 43 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI 1,4-Dioxan-2-ones

L5 ANSWER 44 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Alkoxy acid or ester preparation

L5 ANSWER 45 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Oxidation of glycols

=> d 15 35,40-42, 44, 45 ti fbib abs

L5 ANSWER 35 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Liquid-phase oxidation of ethylene glycol on a platinum-on-carbon catalyst. II. Kinetic studies
 AN 1983:611937 CAPLUS
 DN 99:211937
 TI Liquid-phase oxidation of ethylene glycol on a platinum-on-carbon catalyst. II. Kinetic studies
 AU Khan, Muhammad Ishaq Ali; Miwa, Yoshihisa; Morita, Shushi; Okada, Jutaro
 CS Fac. Pharm. Sci., Kyoto Univ., Kyoto, 606, Japan
 SO Chemical & Pharmaceutical Bulletin (1983), 31(6), 1827-32
 CODEN: CPBTAL; ISSN: 0009-2363
 DT Journal
 LA English
 AB Catalytic oxidation of alkaline aqueous ethylene glycol (I) to glycolic acid over a Pt/C catalyst by O₂ was examined in a slurry reactor at 40 °. The interphase and intraparticle mass transfer resistances were insignificant. The catalyst deactivation observed during the course of expts. is due to the formation of oxidized species of Pt and/or to the adsorption of by-products on the catalyst surface; the decay of catalyst activity is consistent with a first order consecutive process. The rate of reaction is expressed by a power-law model. The orders of reaction with respect to I, NaOH, or O₂ were 0.20, 0.34 and 0, resp. The mechanism of this reaction is discussed.

L5 ANSWER 40 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Aldehydes, ketones, and fatty acids by oxidation of aliphatic alcohols or glycols
 AN 1979:151587 CAPLUS
 DN 90:151587
 TI Aldehydes, ketones, and fatty acids by oxidation of aliphatic alcohols or

glycols
 IN Ando, Wataru; Nakaoka, Ichiro
 PA Kogai Boshi Chosa Kenkyusho K. K., Japan
 SO Ger. Offen., 26 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2826065	A1	19790111	DE 1978-2826065	19780614
				JP 1977-69403	A 19770614
				JP 1977-105881	A 19770905
				JP 1978-5231	A 19780123
				JP 1978-65662	A 19780602
	JP 54005910	A2	19790117	JP 1977-69403	19770614
				A	
	JP 54041811	A2	19790403	JP 1977-105881	19770905
				A	
	JP 54100308	A2	19790808	JP 1978-5231	19780123
				A	
	JP 54157515	A2	19791212	JP 1978-65662	19780602
				A	
	GB 2001621	A	19790207	GB 1978-26925	19780614
				JP 1977-69403	A 19770614
				JP 1977-105881	A 19770905
				JP 1978-5231	A 19780123
				JP 1978-65662	A 19780602
	GB 2036005	A	19800625	GB 1979-31132	19790119
	GB 2036005	B2	19820818		
				JP 1978-5231	A 19780123
				WO 1979-JP13	A 19790119

PATENT FAMILY INFORMATION:

FAN 1979:574833

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54066616	A2	19790529	JP 1977-129670	19771031
				A	
	WO 7900278	A1	19790531	WO 1978-JP10	19781024
	W: BR, DE, GB, US				
				JP 1977-129670	A 19771031
				JP 1978-5231	A 19780123
	DE 2857171	T	19801218	DE 1978-2857171	19781024
				JP 1977-129670	A 19771031
				JP 1978-5231	A 19780123
				WO 1978-JP10	W 19781024
	BR 7808702	A	19810804	BR 1978-8702	19781024
				JP 1977-129670	A 19771031
				JP 1978-5231	A 19780123
				WO 1978-JP10	A 19781024
	GB 2023584	A	19800103	GB 1979-16630	19791024
	GB 2023584	B2	19820818		
				JP 1977-129670	A 19771031
				JP 1978-5231	A 19780123
				WO 1978-JP10	A 19781024
				JP 1979-278	A 19790531

FAN 1981:156323

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55098130	A2	19800725	JP 1979-3062	19790117
				A	
	WO 7900538	A1	19790809	WO 1979-JP13	19790119
	W: DE, GB, US				

DE 2933193 T 19810108 JP 1978-5231 A 19780123
 JP 1979-3062 A 19790117
 DE 1979-2933193 19790119
 JP 1978-5231 A 19780123
 JP 1979-3062 A 19790117
 WO 1979-JP13 W 19790119

AB Aliphatic alcs. and glycols were oxidized by liquid N2O4 to give aldehydes, ketones and fatty acids. Thus, 1.09 mmol 1,10-decanediol in 5mL CCl4 treated with 2 mL 1:1 N2O4-CH2Cl2 at 0° for 6 h gave 76.3% sebacic acid, while 29 mmol Me2CHOH in 0.5 mL Me2SO and 20 mL CCl4 treated with 0.5 mL liquid N2O4 at 0° for 1 h gave 75.2% acetone.

L5 ANSWER 41 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hydroxyacetic acid
 AN 1979:5916 CAPLUS
 DN 90:5916
 TI Hydroxyacetic acid
 IN Saito, Hisashi; Nozue, Moriaki
 PA Kawaken Fine Chemicals Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53098923	A2	19780829	JP 1977-12711	19770208
	JP 60039063	B4	19850904		

JP 1977-12711 A 19770208

AB HOCH2CO2H was prepared by oxidation of HOCH2CH2OH with O or O-containing gases in non-alkaline aqueous media in the presence of Pt catalysts containing Pd, Rh, Ru, or Os. Thus, a mixture of 4.5 g Pt and 0.5 g Pd in 20 mL aqua regia was added to 95 g active C in 1 L 0.25 N aqueous Na2CO3, the mixture stirred 1 h at room temperature and 2 h at 75-85°, 10 mL 38 % aqueous HCHO was added, and the mixture was heated 1 h at 75-85° to form a catalyst. O (0.5 L/min) was fed to an aqueous mixture of 18.6 g catalyst and 186 g HOCH2CH2OH 16 h at 45-55° to give 87.5 % HOCH2CO2H with 99.8 % conversion.

L5 ANSWER 42 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hydroxyacetic acid
 AN 1978:508158 CAPLUS
 DN 89:108158
 TI Hydroxyacetic acid
 IN Saito, Hisashi; Nozue, Moriaki
 PA Kawaken Fine Chemicals Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53046916	A2	19780427	JP 1976-122596	19761013
	JP 60010016	B4	19850314		

JP 1976-122596 A 19761013

AB Oxidation of HOCH2CH2OH (I) by O in non-alkaline aqueous solvents in the presence of Pt-C catalysts prereduced with HCHO, HCO2H, or NaBH4 gave HOCH2CO2H (II). Thus, stirring 5 g Pt in 20 mL aqua regia and 95 g active C in 1 L 1/4 N Na2CO3 1 h at 75-85° and reduction with 10 mL 38% aqueous HCHO 1 h at 75-85° gave a 5% Pt-C catalyst. To an aqueous mixture of 186 g I and

18.6 g catalyst was introduced 0.5 L/min O₂ 24 h at 45-55° to give 82% II (purity 98.5%).

L5 ANSWER 44 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Alkoxy acid or ester preparation

AN 1976:405210 CAPLUS

DN 85:5210

TI Alkoxy acid or ester preparation

IN Suzuki, Shigeto

PA Chevron Research Co., USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3948977	A	19760406	US 1974-532563	19741213
				US 1974-532563	A 19741213

AB About 12 hydroxy-, acetoxy-, or alkoxyacetic acids and/or their esters were prepared by reaction of HCHO with CO and H₂O, AcOH, or alc., resp., and using HF as a catalyst. Thus, an autoclave was charged with HCHO, MeOH, and HF and then pressurized to 1000 psig at 10° with CO. The temperature was raised to 34° over 90 min to give a product containing MeOCH₂CO₂Me (I) 43, MeOCH₂CO₂H (II) 42, and HOCH₂CO₂Me 14%. Similar reaction of CH₂(OMe)₂ with CO gave a product containing I 95 and II 5%. Reaction of HCHO with CO and HOCH₂CH₂OH gave 80% oxo-p-dioxane.

L5 ANSWER 45 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Oxidation of glycols

AN 1974:132818 CAPLUS

DN 80:132818

TI Oxidation of glycols

IN Rutledge, Thomas F.

PA ICI Americas, Inc.

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3799977	A	19740326	US 1972-221801	19720128
				A	
	JP 48085525	A2	19731113	JP 1973-10969	19730126
				US 1972-221801	A 19720128

AB In the oxidation of H(OCH₂CH₂)_nOH (n = 1,2,3,4,6) and Me₂C(CH₂OH)₂ by O over Pt-C, monocarboxylic acids were preferentially formed by adding NaOH solution to maintain the pH at 6.5-9.

=> save temp l5 HAFROMEGcmpd/a

ANSWER SET L5 HAS BEEN SAVED AS 'HAFROMEGCMPD/A'

=> d l5 24-34 ti

L5 ANSWER 24 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Stepwise oxidation of 1,2-diols resulting from molecular oxygen activation by copper

L5 ANSWER 25 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Microbiological production of glycolic acid ethers

L5 ANSWER 26 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of hydroxyacetic acid from ethylene glycol and iridium catalysts

L5 ANSWER 27 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A new approach to catalytic oxidation through copper promoted activation of molecular oxygen

L5 ANSWER 28 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide

L5 ANSWER 29 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI In situ FTIR reflection spectroscopic studies of adsorption and oxidation of ethylene glycol on Pt electrode. (I). Acidic media

L5 ANSWER 30 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide

L5 ANSWER 31 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrosynthesis in aqueous medium: a kinetic study of the electrocatalytic oxidation of oxygenated organic molecules

L5 ANSWER 32 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI The oxidation of ethylene glycol at a platinum electrode in acid and base. An in situ FTIR study

L5 ANSWER 33 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI The oxidation of glyoxal and ethylene glycol on platinum in aqueous acid mediums containing some metal salts

L5 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Chemism of oxygen-alkali delignification. 3. Composition and ways of acid formation

=> lead or pb

569902 LEAD
 268243 LEADS
 819226 LEAD
 (LEAD OR LEADS)
 327953 PB
 14708 PBS
 339086 PB
 (PB OR PBS)

L6 952741 LEAD OR PB

=> gold or Au

210952 GOLD
 79 GOLDS
 210967 GOLD
 (GOLD OR GOLDS)
 168984 AU
 1012 AUS
 169928 AU
 (AU OR AUS)

L7 264341 GOLD OR AU

=> 16 and 17

L8 34547 L6 AND L7

=> 18 and 15

L9 3 L8 AND L5

=> d 19 1-9 ti

L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification of glycolic acid and derivatives thereof

L9 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of high-purity α -hydroxy carboxylic acids from diols

L9 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
TI Electrosynthesis in aqueous medium: a kinetic study of the electrocatalytic oxidation of oxygenated organic molecules

=> d 19 1-9 ti fbib abs

L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification of glycolic acid and derivatives thereof
AN 2004:117795 CAPLUS
DN 140:128821
TI Process for purification of glycolic acid and derivatives thereof
IN Hayashi, Toshio
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043387	A2	20040212	JP 2002-204789	20020712
				JP 2002-204789	20020712

AB The title process comprises adding metal salts or ammonium salts to a mixture of oxalic acid ester and/or oxalic acid and glycolic acid and/or glycolic acid ester and separating the oxalic acid metal salts or oxalic acid ammonium salt. The above-mentioned mixture is obtained by oxidation of ethylene glycol by oxygen in presence of an alc. (e.g., methanol) and a catalyst. Me glycolate (purity 98%) was obtained by the title method.

L9 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of high-purity α -hydroxy carboxylic acids from diols
AN 2004:117794 CAPLUS
DN 140:163469
TI Preparation of high-purity α -hydroxy carboxylic acids from diols
IN Hayashi, Toshio; Baba, Hideyuki
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2002-204784 A 20020712

FAN JP 2004043682 A2 20040212 JP 2002-204784 20020712

2004:117793

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004043385	A2	20040212	JP 2002-204748	20020712
US 2004138409	A1	20040715	US 2003-618491	20030711
			JP 2002-204748	A 20020712
			JP 2002-204754	A 20020712
			JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acids, which are free from HCHO and Cl and useful for cosmetics (no data), are prepared by reaction of 1,2-diols and optional primary alcs. with O in the presence of metal-containing catalysts and hydrolysis of esters. Ethylene glycol and MeOH were treated with an O-N mixture in the presence of **Pb-Au** alloy/TiO₂-SiO₂ catalyst at 90° for 5 h to give a reaction mixture, which was filtered for removal of the catalyst, treated with Mg glycolate/MeOH for removal oxalate, and distilled to give Me glycolate with $\geq 98\%$ purity. Hydrolysis of the Me glycolate gave glycolic acid in 100% yield.

L9 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Electrosynthesis in aqueous medium: a kinetic study of the electrocatalytic oxidation of oxygenated organic molecules

AN 1991:459371 CAPLUS

DN 115:59371

TI Electrosynthesis in aqueous medium: a kinetic study of the electrocatalytic oxidation of oxygenated organic molecules

AU Belgsir, E. M.; Bouhier, E.; Essis-Yei, H.; Kokoh, K. B.; Beden, B.; Huser, H.; Leger, J. M.; Lamy, C.

CS Lab. Chim. 1, Univ. Poitiers, Poitiers, 86022, Fr.

SO Electrochimica Acta (1991), 36(7), 1157-64

CODEN: ELCAAV; ISSN: 0013-4686

DT Journal

LA English

AB The electrocatalytic oxidation of small organic mols. (methanol, ethylene-glycol, glyoxal, propane-diols and glucose) at electrodes modified or unmodified by **lead** adatoms was investigated in order to follow the formation and to determine the concentration of the different products involved. Prolonged electrolyses of the organic compds. were carried out at controlled-programmed potentials with different potential programs including cleaning sequences of the working electrode. Analyses of products were performed with "online" gas and liquid chromatogs. The kinetics of the overall reaction can be determined from these results and the different factors which modify the electroactivity of the electrode and the selectivity of the reaction are discussed.

=> d 15 24, 26-28, 30, 33, 34 ti fbib abs

L5 ANSWER 24 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

TI Stepwise oxidation of 1,2-diols resulting from molecular oxygen activation by copper

AN 1996:491657 CAPLUS

DN 125:221162
 TI Stepwise oxidation of 1,2-diols resulting from molecular oxygen activation by copper
 AU Prati, Laura; Rossi, Michele
 CS Dipartimento di Chimica Inorganica, Metallorganica ed Analitica and Centro C.N.R., Universita di Milano, via Venezian 21, Milan, I-20133, Italy
 SO Journal of Molecular Catalysis A: Chemical (1996), 110(3), 221-226
 CODEN: JMCCF2; ISSN: 1381-1169
 PB Elsevier
 DT Journal
 LA English
 AB The oxidation of 1,2-diols through copper promoted activation of mol. oxygen was studied. The influence of the substituents and exptl. conditions is discussed and examples of catalytic applications are reported.

L5 ANSWER 26 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of hydroxyacetic acid from ethylene glycol and iridium catalysts
 AN 1995:668453 CAPLUS
 DN 123:82837
 TI Preparation of hydroxyacetic acid from ethylene glycol and iridium catalysts
 IN Oku, Tomoharu; Onda, Yoshuki; Tsuneki, Hideaki; Sumino, Yukio
 PA Nippon Catalytic Chem Ind, Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 07112953	A2	19950502	JP 1993-256116	19931013
				JP 1993-256116	19931013

OS CASREACT 123:82837
 AB HOCH2CO2H (I), useful as a tanning agent, chelating agent, monomer, and intermediates for drugs and agrochems., is prepared in high selectivity by oxidation of HOCH2CH2OH (II) with O in the presence of Ir catalysts in aqueous solvents. Also claimed is catalysts, prepared by supporting Ir on inert porous supports, for the above preparation An Ir catalyst, prepared by treatment of activated C with a HCl solution of IrCl4 and reduction with HCHO, was autoclaved with II and H2O at 80° and 10 kgf/cm2 while bubbling with air for 20 h to give 86% I at 98% conversion, vs. 55 and 100%, resp., for a control reaction using a catalyst prepared from H2PtCl6 instead of IrCl4 at 50°.

L5 ANSWER 27 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A new approach to catalytic oxidation through copper promoted activation of molecular oxygen
 AN 1995:534200 CAPLUS
 DN 123:168948
 TI A new approach to catalytic oxidation through copper promoted activation of molecular oxygen
 AU Prati, Laura; Rossi, Michele
 CS Dipartimento di Chimica Generale Inorganica e Analitica, Universita di Milano, Milan, Italy
 SO Chemical Industries (Dekker) (1995), 62(Catalysis of Organic Reactions), 483-6
 CODEN: CHEIDI; ISSN: 0737-8025
 PB Dekker
 DT Journal
 LA English
 AB Convenient synthesis of 4,5-disubstituted quinones from phenol and

synthesis of hydroxy acids from 1,2-diols through copper activation of mol. oxygen are reported. E.g., PhOH reacts with O₂ in the presence of metallic Cu, pyridine, and alcs. ROH (R = Me, Bu, etc.) to give 4,5-dialkoxy-1,2-benzoquinones in 60-72% yields. Cu-catalyzed oxidation of 1,2-ethanediol or 1,2-propanediol in the presence of pyridine and O₂ gave hydroxyacetic acid and lactic acid, resp.

- L5 ANSWER 28 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide
AN 1994:633397 CAPLUS
DN 121:233397
TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide
AU Sheldon, R. A.; Dakka, J.
CS Lab. Org. Chem. Catal., Delft Univ. Technol., Delft, Neth.
SO Erdoel, Erdgas, Kohle (1993), 109(12), 520-2
CODEN: EEKOEY; ISSN: 0179-3187
DT Journal
LA English
AB The selective oxidation of 1,2-diols with H₂O₂ (I) over a silicalite catalyst was investigated. Secondary alc. groups are oxidized selectively in the presence of primary ones, e.g., propylene glycol and 2-phenyl-1,2-ethanediol afford hydroxyacetone and β -hydroxyacetophenone, resp., as the major product. Further oxidation affords the α -dicarbonyl compound which undergoes subsequent oxidative cleavage with excess I. The selectivity of the reaction with regard to further oxidation is markedly influenced by the choice of solvent, e.g., acetoin is preferentially formed from 2,3-butanediol in H₂O and MeOH, but appreciable amts. of 2,3-butanedione were observed with Me₂CO as solvent.
- L5 ANSWER 30 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide
AN 1993:236339 CAPLUS
DN 118:236339
TI TS-1 catalyzed selective oxidation of 1,2-diols with hydrogen peroxide
AU Sheldon, R. A.; Dakka, J.
CS Delft Univ. Technol., Delft, Neth.
SO Berichte - Deutsche Wissenschaftliche Gesellschaft fuer Erdoel, Erdgas und Kohle, Tagungsbericht (1992), 9204(Proc. DGMK-Conf. Sel. Oxid. Petrochem., 1992), 215-25
CODEN: BWGTEK; ISSN: 0938-068X
DT Journal
LA English
AB The use of silicalite TS-1 as a selective catalyst for the H₂O₂-oxidation of 1,2-diols to prepare industrially important chems. is investigated. The process provides the combination of an environmentally clean oxidant and a stable, recyclable catalyst.
- L5 ANSWER 33 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
TI The oxidation of glyoxal and ethylene glycol on platinum in aqueous acid mediums containing some metal salts
AN 1987:414569 CAPLUS
DN 107:14569
TI The oxidation of glyoxal and ethylene glycol on platinum in aqueous acid mediums containing some metal salts
AU Pierre, Gerard; Ziade, Ahlam; El Kordi, Mokhlis
CS Lab. Electrochim. Org. Photochim. Redox, Univ. Sci. Technol. Med. Grenoble, Saint Martin d'Heres, 38402, Fr.
SO Electrochimica Acta (1987), 32(4), 601-6
CODEN: ELCAAV; ISSN: 0013-4686
DT Journal
LA English
AB The oxidation of glyoxal and ethylene glycol in aqueous mediums like N HClO₄, N H₂SO₄ or M KNO₃ on a Pt anode led mainly to the formation of glyoxylic

acid and to the breaking of the C-C bond, giving HCOOH or HCHO. The addition of metal salts (Ag, Sn, Pb, Tl) favors this latter reaction. The adsorption of glyoxal, which is an important step for its transformation into glyoxylic acid, is promoted by the lack of Pt oxides or hydroxides on the anode surface and is possible even at the oxidation potential of glyoxal.

L5 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Chemism of oxygen-alkali delignification. 3. Composition and ways of acid formation
 AN 1985:455617 CAPLUS
 DN 103:55617
 TI Chemism of oxygen-alkali delignification. 3. Composition and ways of acid formation
 AU Sultanov, V. S.; Zarubin, M. Ya.; Krutov, S. M.; Fedulina, T. G.
 CS Leningr. Lesotekh. Akad., Leningrad, USSR
 SO Koksnes Kimija (1985), (3), 51-65
 CODEN: KHDRDQ; ISSN: 0201-7474
 DT Journal
 LA Russian
 AB The composition of carboxylic acids formed during oxidation of lignin (I) [9005-53-2] model compds. and birchwood dioxane lignin [8068-03-9] was discussed. I model compds. having a CO₂H or OH group in the α -position to the ring were converted to vanillic acid [121-34-6]. C₂-6-unsatd. dicarboxylic acids were formed as a result of redox reactions. The formation of succinic acid [110-15-6], glycolic acid [79-14-1], and lactic acid [50-21-5] from an aromatic ring was established for the 1st time. 4-Methoxy-o-phthalic acid [1885-13-8] was formed upon oxidation of veratryl derivs., whereas hydromuconic acid was identified in decomposition products of α -veratrylpropanone β -guaiacyl ether [1835-09-2]. A general scheme of oxidative reaction of I was presented.

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
88.79	102.74

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-11.68	-11.68

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 07:01:35 ON 30 JUN 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *

SESSION RESUMED IN FILE 'CAPLUS' AT 07:21:00 ON 30 JUN 2005

FILE 'CAPLUS' ENTERED AT 07:21:00 ON 30 JUN 2005

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
88.79	102.74

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-11.68	-11.68

=> d his

(FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005)

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005

E ETHYLENE GLYCOL/CN

L1 1 E3

E HYDROXYACETIC ACID/CN

L2 1 E3

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005

L3 8885 L1/RCT

L4 639 L2/PREP

L5 45 L3 AND L4

SAVE TEMP L5 HAFROMEGCMPD/A

L6 952741 LEAD OR PB

L7 264341 GOLD OR AU

L8 34547 L6 AND L7

L9 3 L8 AND L5

=> 15 and 17

L10 13 L5 AND L7

=> 110 not 19

L11 10 L10 NOT L9

=> d 111 1-10 ti

L11 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method for stabilization of glycolic acid ester

L11 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for preparation of α -hydroxycarboxylic acid esters

L11 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for manufacture of α -hydroxycarboxylic acid ester

L11 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for purification and manufacture of glycolic acid ester

L11 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

L11 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for purification and manufacture of glycolic acid ester

L11 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Oxygen adsorption on **Au**/Al₂O₃ catalysts and relation to the catalytic oxidation of ethylene glycol to glycolic acid

L11 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Application of **gold** catalysts to selective liquid phase oxidation

L11 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Metal sols as a useful tool for heterogeneous **gold** catalyst preparation: reinvestigation of a liquid phase oxidation

L11 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Chemoselective catalytic oxidation of polyols with dioxygen on
gold supported catalysts

=> d 111 1-10 ti fbib abs

L11 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method for stabilization of glycolic acid ester

AN 2004:588210 CAPLUS

DN 141:124117

TI Method for stabilization of glycolic acid ester

IN Yoshida, Hiroshi; Nakagawa, Satoshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004203743	A2	20040722	JP 2002-351003	20021203
				JP 2002-321286	A 20021105

OS MARPAT 141:124117

AB In the title method for stabilization of glycolic acid ester (e.g., Me glycolate) containing ≥ 1 mol% water (relative to said ester), the amount of alc. ROH (e.g., methanol) corresponding to the ester group CO₂R (R = organic residue) is adjusted so that the alc./water mol ratio in said glycolic acid ester is ≥ 0.3 . This invention protects the storage stability of the title ester. The title ester is a raw material for synthetic resins.

L11 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for preparation of α -hydroxycarboxylic acid esters

AN 2004:490810 CAPLUS

DN 141:53962

TI Process for preparation of α -hydroxycarboxylic acid esters

IN Yoshida, Hiroshi; Tsuneki, Hideaki; Hayashi, Toshio; Baba, Hideyuki; Inagaki, Takahiro; Nakagawa, Satoshi; Kakimoto, Yukihiro; Kitada, Ritsuo; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:351616

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:529719

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2005:371052

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

OS CASREACT 141:53962

AB This invention pertains to a method for producing α -hydroxycarboxylic acid esters, in which the α -hydroxycarboxylic acid esters are more effectively inhibited or prevented from undergoing side reactions than in conventional techniques. The process comprises the following three steps: step (1) in which either (i) a 1,2-diol and the same or another 1,2-diol or (ii) a 1,2-diol and an alc. are reacted in the presence of oxygen to obtain a reaction product containing an α -hydroxycarboxylic acid ester; step (2) in which the reaction product obtained in the step (1) is distilled under vacuum to sep. out the α -hydroxycarboxylic acid ester; and step (3) in which part or all of the water is removed from the reaction product obtained in the step (1) and a mixture comprising the 1,2-diol and/or alc. remaining unreacted is supplied to the step (1). For example, a mixture of HOCH₂CH₂OH and MeOH was

treated with O₂ in the presence of an Au catalyst to give glycolic acid Me ester (53.8%).

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for manufacture of α -hydroxycarboxylic acid ester
AN 2004:354284 CAPLUS
DN 140:375670
TI Process for manufacture of α -hydroxycarboxylic acid ester
IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131410	A2	20040430	JP 2002-296636 JP 2002-296636	20021009 20021009
AB	In the manufacture of α -hydroxycarboxylic acid ester by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the reaction product is distilled; the pH of said reaction product is adjusted to 5 - 9 before distillation, or the pH in the distillation system is adjusted to 5 - 9. The title process is highly efficient.				

L11 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification and manufacture of glycolic acid ester
AN 2004:351617 CAPLUS
DN 140:375669
TI Process for purification and manufacture of glycolic acid ester
IN Yoshida, Hiroshi; Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131411	A2	20040430	JP 2002-296643 JP 2002-296643	20021009 20021009
OS	MARPAT 140:375669				
AB	The process for distillation of a mixture containing glycolic acid ester is done while an alc. is supplied to the distillation system; said alc. (ROH) corresponds to CO ₂ R [R = hydrocarbon] of said ester. In the manufacture of glycolic acid ester from ethylene glycol or ethylene glycol and an alc. in the presence of oxygen, the reaction product mixture is distilled; the distillation of said mixture is done as described above. The title process is highly efficient and inhibits the formation of byproducts.				

L11 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester
AN 2004:351616 CAPLUS
DN 140:375668
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester
IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei;

Kitada, Ritsuo; Kakimoto, Yukihiro
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2005:371052

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009

JP 2002-296623 A 20021009
 JP 2002-350987 A 20021203
 JP 2002-350994 A 20021203
 JP 2002-350997 A 20021203
 JP 2002-158809 A 20030604
 JP 2004131408 A2 20040430 JP 2002-296621 20021009
 JP 2004131409 A2 20040430 JP 2002-296623 20021009
 JP 2004182643 A2 20040702 JP 2002-350987 20021203
 JP 2004182644 A2 20040702 JP 2002-350994 20021203
 JP 2004182645 A2 20040702 JP 2002-350997 20021203

AB In the manufacture of α -hydroxycarboxylic acid ester (I) by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the liquid containing the reaction product is distilled, and I is collected ; in the distillation of the liquid containing the reaction product, said liquid is made into a thin film which is heated by contact with the heating surface. In the method for purification of the title compound by distillation, the mixture to be distilled is made into a thin film which is heated by contact with the heating surface. Me glycolate with 98% purity was obtained by the title methods.

L11 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for purification and manufacture of glycolic acid ester

AN 2004:351615 CAPLUS

DN 140:375667

TI Methods for purification and manufacture of glycolic acid ester

IN Yoshida, Hiroshi; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351616

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,				

GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS,
 LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
 TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

				JP 2002-350987	A	20021203
				JP 2002-350997	A	20021203
	JP 2004182643	A2	20040702	JP 2002-350987		20021203
	JP 2004182645	A2	20040702	JP 2002-350997		20021203
FAN	2004:529719					
	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
	-----	-----	-----	-----		-----
PI	JP 2004182644	A2	20040702	JP 2002-350994		20021203
	US 2005090686	A1	20050428	US 2003-680919		20031008
				JP 2002-296621	A	20021009
				JP 2002-296623	A	20021009
				JP 2002-350987	A	20021203
				JP 2002-350994	A	20021203
				JP 2002-350997	A	20021203
				JP 2002-158809	A	20030604
FAN	2005:371052					
	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
	-----	-----	-----	-----		-----
PI	US 2005090686	A1	20050428	US 2003-680919		20031008
				JP 2002-296621	A	20021009
				JP 2002-296623	A	20021009
				JP 2002-350987	A	20021203
				JP 2002-350994	A	20021203
				JP 2002-350997	A	20021203
				JP 2002-158809	A	20030604
	JP 2004131408	A2	20040430	JP 2002-296621		20021009
	JP 2004131409	A2	20040430	JP 2002-296623		20021009
	JP 2004182643	A2	20040702	JP 2002-350987		20021203
	JP 2004182644	A2	20040702	JP 2002-350994		20021203
	JP 2004182645	A2	20040702	JP 2002-350997		20021203

AB In the method for purification of glycolic acid ester by distillation of a mixture containing glycolic acid ester (I), one or more components having b.ps. lower than that of I, one or more components having b.ps. higher than that of I, the fraction containing I is collected by the side cut system. In the manufacture of glycolic acid ester from ethylene glycol or ethylene glycol and an alc. in the presence of oxygen, the reaction product mixture is distilled; in the distillation of said mixture, the fraction containing I is collected by the side cut system.

L11 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Oxygen adsorption on **Au**/Al₂O₃ catalysts and relation to the catalytic oxidation of ethylene glycol to glycolic acid
 AN 2003:313333 CAPLUS
 DN 139:86950
 TI Oxygen adsorption on **Au**/Al₂O₃ catalysts and relation to the catalytic oxidation of ethylene glycol to glycolic acid
 AU Berndt, H.; Pitsch, I.; Evert, S.; Struve, K.; Pohl, M.-M.; Radnik, J.; Martin, A.
 CS Institut für Angewandte Chemie Berlin-Adlershof e.V. (ACA), Berlin, D-12489, Germany
 SO Applied Catalysis, A: General (2003), 244(1), 169-179
 CODEN: ACAGE4; ISSN: 0926-860X

PB Elsevier Science B.V.

DT Journal

LA English

OS CASREACT 139:86950

AB Static O adsorption and H pulse titration of chemisorbed O were checked and successfully used as tools for characterization of the dispersity and surface area of **Au**/Al₂O₃ catalysts tested in the oxidation of ethylene glycol. A correlation of the catalytic activity with the O adsorption of **Au**/Al₂O₃ catalysts having different **Au** dispersity and content showed a steady increase of the rate of the glycolic acid formation with increasing O chemisorption and **Au** surface area, resp. No differences in the selectivity of the reaction were observed with low- and high-dispersed **Au**/Al₂O₃ catalysts, a selectivity to glycolic acid >95% was obtained with all the samples. Therefore, we could clearly demonstrate that the selective oxidation of ethylene glycol to glycolic acid is not a structure-sensitive reaction, i.e., this reaction is not restricted to a defined **Au** particle size.

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Application of **gold** catalysts to selective liquid phase oxidation

AN 2002:249066 CAPLUS

DN 137:216658

TI Application of **gold** catalysts to selective liquid phase oxidation

AU Biella, S.; Castiglioni, G. L.; Fumagalli, C.; Prati, L.; Rossi, M.

CS Universita di Milano, Dipartimento di Chimica Inorganica Metallorganica e Analitica e Centro CNR, Milan, 20133, Italy

SO Catalysis Today (2002), 72(1-2), 43-49

CODEN: CATTEA; ISSN: 0920-5861

PB Elsevier Science B.V.

DT Journal

LA English

OS CASREACT 137:216658

AB New applications of **gold** catalysts for selective oxidation of organic mols. are reported. All reactions investigated were performed using mol. oxygen in aqueous solution under mild conditions. Polyhydroxylated aliphatic mols.

can be oxidized to monocarboxylates with high selectivity towards the primary alc. group in the presence of alkali, whereas the Ph group enhances the reactivity of a benzylic alc. group as it limits the selectivity to mandelate starting from phenyl-1,2-ethanediol. α -And β -amino alcs. react slowly with oxygen in the absence and quickly in the presence of alkali to produce the corresponding amino acid derivs. Aliphatic aldehydes and glucose are easily oxidized to free carboxylic acid. A comparison of **gold** catalysts and conventional Pd and Pt monometallic, bimetallic and tricomponent catalysts has, in some cases, been done.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Metal sols as a useful tool for heterogeneous **gold** catalyst preparation: reinvestigation of a liquid phase oxidation

AN 2000:619490 CAPLUS

DN 134:10032

TI Metal sols as a useful tool for heterogeneous **gold** catalyst preparation: reinvestigation of a liquid phase oxidation

AU Porta, F.; Prati, L.; Rossi, M.; Coluccia, S.; Martra, G.

CS Dipartimento di Chimica Inorganica Metallorganica e Analitica e Centro

CNR, Universita di Milano, Milan, 20133, Italy
 SO Catalysis Today (2000), 61(1-4), 165-172
 CODEN: CATTEA; ISSN: 0920-5861
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB Differently stabilized metal sols have been used as precursors in the preparation of heterogeneous **gold** catalysts for liquid phase oxidation in water solution. The methodol. of sols generation appears to be fundamental to obtaining nanoparticles; the support, instead, plays an important role in maintaining particle dimension and morphol. Three different materials (γ -Al₂O₃, SiO₂ and activated carbon) have been used as the supporting agents for different **gold** sols that were obtained by reducing HAuCl₄ with NaBH₄ in the presence of polyvinylalc. (PVA) or polyvinylpyrrolidone (PVP) and with the tetrakis(hydroxymethyl)phosphonium chloride (THPC)/NaOH system. During the immobilization step, the maintenance of the particle dimension observed in solution depends on both the support and the type of soluble. The **gold** particle mean size of the colloidal suspension is more easily maintained on oxidic supports than on carbon, the latter apparently needing both steric and polar stabilization of the **gold** particle. Comparison of **Au**/ γ -Al₂O₃ and **Au**/C catalyst activity in the liquid phase oxidation of ethylene glycol to glycolate highlighted the peculiarity of **gold** on carbon catalysts; in fact, the normally observed trend of reactivity is partially reversed, medium sized **gold** particle being the most active.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Chemoselective catalytic oxidation of polyols with dioxygen on **gold** supported catalysts
 AN 1998:93352 CAPLUS
 DN 128:153833
 TI Chemoselective catalytic oxidation of polyols with dioxygen on **gold** supported catalysts
 AU Prati, Laura; Rossi, Michele
 CS Dipartimento di Chimica Inorganica Metallorganica e Analitica, Universita di Milano e Centro C.N.R., Milan, I-20133, Italy
 SO Studies in Surface Science and Catalysis (1997), 110(3rd World Congress on Oxidation Catalysis, 1997), 509-516
 CODEN: SSCTDM; ISSN: 0167-2991
 PB Elsevier Science B.V.
 DT Journal
 LA English
 OS CASREACT 128:153833
 AB Supported **gold** catalysts in the presence of dioxygen have shown high selectivity toward polyols mono-oxygenation. In fact, com. useful products such as glycolic and lactic acids from, resp., ethane-1,2-diol and propane-1,2-diol, can be advantageously obtained. Studies on the influence of the support and preparation methods are reported along with comparison tests involving Pd and Pt catalysts.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d cost

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
13.26	14.15
2.04	2.22
11.34	20.54
112.85	116.53

CONNECT CHARGES
 NETWORK CHARGES
 SEARCH CHARGES
 DISPLAY CHARGES

FULL ESTIMATED COST

139.49

153.44

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-18.98

-18.98

IN FILE 'CAPLUS' AT 07:22:46 ON 30 JUN 2005

=> ?glycolate

L12 15377 ?GLYCOLATE

=> d his

(FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005)

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005

E ETHYLENE GLYCOL/CN

L1 1 E3

E HYDROXYACETIC ACID/CN

L2 1 E3

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005

L3 8885 L1/RCT

L4 639 L2/PREP

L5 45 L3 AND L4

SAVE TEMP L5 HAFROMEGCMPD/A

L6 952741 LEAD OR PB

L7 264341 GOLD OR AU

L8 34547 L6 AND L7

L9 3 L8 AND L5

L10 13 L5 AND L7

L11 10 L10 NOT L9

L12 15377 ?GLYCOLATE

=> l1 and l7

43666 L1

L13 424 L1 AND L7

=> l12 and l13

L14 30 L12 AND L13

=> d l14 20-30 ti

L14 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN

TI Selective liquid phase oxidation using **gold** catalysts

L14 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN

TI Metal sols as a useful tool for heterogeneous **gold** catalyst preparation: reinvestigation of a liquid phase oxidation

L14 ANSWER 22 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chemoselective catalytic oxidation of polyols with dioxygen on **gold** supported catalysts

L14 ANSWER 23 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN

TI Catalytic process for preparing carboxylic acid salts

L14 ANSWER 24 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN

TI Catalysts for preparation of carboxylic acid salt from primary alcohol and alkali metal hydroxide

L14 ANSWER 25 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Applications of real-time FTIR spectroscopy to the elucidation of complex electroorganic pathways: electrooxidation of ethylene glycol on **gold**, platinum, and nickel in alkaline solution

L14 ANSWER 26 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Mechanistic study of the electrooxidation of ethylene glycol on **gold** and adatom-modified **gold** electrodes in alkaline medium

L14 ANSWER 27 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrochemical reduction of niobium glycolates in ethylene glycol

L14 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI The anodic oxidation of ethylene glycol at platinum, **gold** and platinum/**gold** alloys in alkaline solution

L14 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI The electrooxidation of ethylene glycol at **gold** in potassium hydroxide

L14 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Stabilizing poly(vinyl halide) resins with a terpene and a sulfur-containing compound

=> ester

563053 ESTER
 419726 ESTERS
 L15 786227 ESTER
 (ESTER OR ESTERS)

=> l14 and l15

L16 16 L14 AND L15

=> d l16 10-16 ti

L16 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -oxo carboxylic acids and their **esters**

L16 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for purification of glycolic acid and derivatives thereof

L16 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols

L16 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -hydroxy carboxylic acid **esters** from diols

L16 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for producing diol derivatives

L16 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Catalysts for carboxylic **ester** production and processes for producing carboxylic **esters**

L16 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Stabilizing poly(vinyl halide) resins with a terpene and a sulfur-containing compound

=> d l16 10-15 ti fbib abs

L16 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -oxo carboxylic acids and their **esters**
 AN 2004:305393 CAPLUS
 DN 140:303317
 TI Preparation of α -oxo carboxylic acids and their **esters**
 IN Yoshida, Hiroshi; Ariyoshi, Kimio; Hayashi, Toshio
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004115426	A2	20040415	JP 2002-280484 JP 2002-280484	20020926 20020926

AB Title compds. are prepared by reaction of 1,2-diols or 1,2-diols with alcs. in the presence of O, dehydrogenation of α -hydroxy carboxylic acid **esters** in the presence of O, and optional hydrolysis. Ethylene glycol was treated with MeOH in the presence of Au/Al-SiO₂ catalyst at 90° for 5 h to give Me **glycolate**, which was oxidized by O using Na₃(PMo₁₂O₄₀).nH₂O/TSS 2S (SiC) at 230° for 6 h to give 94.4% Me glyoxylate.

L16 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for purification of glycolic acid and derivatives thereof
 AN 2004:117795 CAPLUS
 DN 140:128821
 TI Process for purification of glycolic acid and derivatives thereof
 IN Hayashi, Toshio
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043387	A2	20040212	JP 2002-204789 JP 2002-204789	20020712 20020712

AB The title process comprises adding metal salts or ammonium salts to a mixture of oxalic acid **ester** and/or oxalic acid and glycolic acid and/or glycolic acid **ester** and separating the oxalic acid metal salts or oxalic acid ammonium salt. The above-mentioned mixture is obtained by oxidation of ethylene glycol by oxygen in presence of an alc. (e.g., methanol) and a catalyst. Me **glycolate** (purity 98%) was obtained by the title method.

L16 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 AN 2004:117794 CAPLUS
 DN 140:163469
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 IN Hayashi, Toshio; Baba, Hideyuki
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712

US 2004138409	A1	20040715	US 2003-618491	20030711
			JP 2002-204748	A 20020712
			JP 2002-204754	A 20020712
			JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-204784	A 20020712
	JP 2004043682	A2	20040212	JP 2002-204784	20020712

FAN 2004:117793

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acids, which are free from HCHO and Cl and useful for cosmetics (no data), are prepared by reaction of 1,2-diols and optional primary alcs. with O in the presence of metal-containing catalysts and hydrolysis of **esters**. Ethylene glycol and MeOH were treated with an O-N mixture in the presence of Pb-Au alloy/TiO₂-SiO₂ catalyst at 90° for 5 h to give a reaction mixture, which was filtered for removal of the catalyst, treated with Mg **glycolate** /MeOH for removal oxalate, and distilled to give Me **glycolate** with $\geq 98\%$ purity. Hydrolysis of the Me **glycolate** gave glycolic acid in 100% yield.

L16 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of α -hydroxy carboxylic acid **esters** from diols

AN 2004:117793 CAPLUS

DN 140:163472

TI Preparation of α -hydroxy carboxylic acid **esters** from diols

IN Hayashi, Toshio; Baba, Hideyuki

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2004007422 A1 20040122 WO 2003-JP8699 20030709
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2004043682 A2 20040212 JP 2002-204784 A 20020712
FAN 2004:117794 JP 2002-204784 20020712

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acid **esters** are prepared from 1,2-diols
or 1,2-diols and primary alcs. by oxygenation in the presence of
metal-containing catalysts. Ethylene glycol and MeOH were heated under N/O in
the presence of Au/Al-SiO₂ catalyst at 90° for 4 h to
give Me **glycolate** and 2-hydroxymethyl **glycolate** with
82.5 and 14.6% selectivity, resp., at 64.8% conversion.

L16 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for producing diol derivatives

AN 2004:60446 CAPLUS

DN 140:111823

TI Process for producing diol derivatives

IN Hayashi, Toshio; Baba, Hideyuki

PA Nippon Shokubai Co., Ltd., Japan

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2004043682	A2	20040212	JP 2002-204784	A 20020712
				JP 2002-204784	20020712

PATENT FAMILY INFORMATION:

FAN 2004:117793

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712

FAN 2004:117794 JP 2002-204784 A 20020712

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004043386	A2	20040212	JP 2002-204754	20020712
US 2004138409	A1	20040715	US 2003-618491	20030711
			JP 2002-204748	A 20020712
			JP 2002-204754	A 20020712
			JP 2002-204784	A 20020712

AB 1,2-Diols or 1,2-diols containing a primary alc. are oxidized with O in the presence of metal catalysts on supports to obtain α -hydroxycarboxylic **esters**. Thus, ethylene glycol (I) 3.1, methanol 15, and Au/Al-SiO₂ 1.5 g were stirred in an autoclave, pressured with 0.2 MPa N and 0.3 MPa O, and heated 4 h at 90° to give 82.5% Me **glycolate** at I conversion 64.8%.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalysts for carboxylic **ester** production and processes for producing carboxylic **esters**
AN 2002:946180 CAPLUS
DN 138:25063
TI Catalysts for carboxylic **ester** production and processes for producing carboxylic **esters**
IN Hayashi, Toshio; Inagaki, Takahiro
PA Nippon Shokubai Co., Ltd., Japan
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002098558	A1	20021212	WO 2002-JP5496	20020604
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
			JP 2001-167739	A 20010604
			JP 2001-294233	A 20010926
JP 2003093876	A2	20030402	JP 2001-294233	20010926
US 2003060655	A1	20030327	US 2002-162040	20020603
			JP 2001-167739	A 20010604
			JP 2001-294233	A 20010926
JP 2003053188	A2	20030225	JP 2002-163348	20020604
			JP 2001-167739	A 20010604
EP 1393800	A1	20040303	EP 2002-733287	20020604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
			JP 2001-167739	A 20010604
			JP 2001-294233	A 20010926
			WO 2002-JP5496	W 20020604

AB Aldehydes and alcs. or ≥ 1 alc. and O react to prepare **esters** using Au optionally containing a 2nd element having diameter < 6 nm on supports as catalysts. Thus, 1.5 mL methacrolein, 15 mL methanol, 0.5 g 4.6% Au/ γ -alumina, and 0.2 MPa O in an autoclave were stirred at 80° for 2 h to prepare Me methacrylate at selectivity 85,

yield 75, and methacrolein conversion 88%.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	202.13	216.08
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-23.36	-23.36

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STN INTERNATIONAL SESSION SUSPENDED AT 07:46:29 ON 30 JUN 2005

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PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
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FILE 'CAPLUS' ENTERED AT 07:52:18 ON 30 JUN 2005
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	202.58	216.53
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-23.36	-23.36

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	202.58	216.53
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-23.36	-23.36

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DICTIONARY FILE UPDATES: 29 JUN 2005 HIGHEST RN 853295-05-3

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* The CA roles and document type information have been removed from *
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* effective March 20, 2005. A new display format, IDERL, is now *
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*
*****
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Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> e methyl glycolate/cn

E1	1	METHYL GLYCOL ACETATE/CN
E2	1	METHYL GLYCOL PHTHALATE/CN
E3	1 -->	METHYL GLYCOLATE/CN
E4	1	METHYL GLYCOLATE D-GLUCONATE PENTAACETATE/CN
E5	1	METHYL GLYCOLATE HOMOPOLYMER/CN
E6	1	METHYL GLYCOLATE HOMOPOLYMER, SRU/CN
E7	1	METHYL GLYCOLATE POLYMER/CN
E8	1	METHYL GLYCOLATE-2-2H2/CN
E9	1	METHYL GLYCYLGLYCINATE HYDROCHLORIDE/CN
E10	1	METHYL GLYCYLGLYCYLGLYCINATE HYDROCHLORIDE/CN
E11	1	METHYL GLYCYRRHETATE/CN
E12	1	METHYL GLYCYRRHETATE B-D-GALACTOSIDE/CN

=> e3

L17 1 "METHYL GLYCOLATE"/CN

=> e ethyl glycolate/cn

E1	1	ETHYL GLYCOL MONOBUTYRATE/CN
E2	1	ETHYL GLYCOL, FUMARATE/CN
E3	1 -->	ETHYL GLYCOLATE/CN
E4	1	ETHYL GLYCOLATE HOMOPOLYMER/CN
E5	1	ETHYL GLYCOLATE HOMOPOLYMER, SRU/CN
E6	1	ETHYL GLYCOLATE P-HYDROXYBENZOATE/CN
E7	1	ETHYL GLYCOLATE SODIUM SALT/CN
E8	1	ETHYL GLYCOLIDE-LACTIDE COPOLYMER/CN
E9	1	ETHYL GLYCOLIMIDATE HYDROCHLORIDE/CN
E10	1	ETHYL GLYCOLITHOCHOLATE/CN
E11	1	ETHYL GLYCYL-B-ALANINATE/CN
E12	1	ETHYL GLYCYL-L-LEUCINATE/CN

=> 13

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code appended to it.

=> e3

L18 1 "ETHYL GLYCOLATE"/CN

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST	10.06	226.59
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-23.36

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 FILE LAST UPDATED: 29 Jun 2005 (20050629/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l17/prep
 505 L17
 3323638 PREP/RL
 L19 122 L17/PREP
 (L17 (L) PREP/RL)

=> l18/prep
 503 L18
 3323638 PREP/RL
 L20 41 L18/PREP
 (L18 (L) PREP/RL)

=> l19 or l20
 L21 148 L19 OR L20

=> d his

(FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005)

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005
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 L1 1 E3
 E HYDROXYACETIC ACID/CN
 L2 1 E3

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005
 L3 8885 L1/RCT
 L4 639 L2/PREP
 L5 45 L3 AND L4
 SAVE TEMP L5 HAFROMEGCMPD/A
 L6 952741 LEAD OR PB
 L7 264341 GOLD OR AU
 L8 34547 L6 AND L7

L9 3 L8 AND L5
L10 13 L5 AND L7
L11 10 L10 NOT L9
L12 15377 ?GLYCOLATE
L13 424 L1 AND L7
L14 30 L12 AND L13
L15 786227 ESTER
L16 16 L14 AND L15

FILE 'REGISTRY' ENTERED AT 07:52:26 ON 30 JUN 2005

E METHYL GLYCOLATE/CN
L17 1 E3
E ETHYL GLYCOLATE/CN
L18 1 E3

FILE 'CAPLUS' ENTERED AT 07:53:21 ON 30 JUN 2005

L19 122 L17/PREP
L20 41 L18/PREP
L21 148 L19 OR L20

=> l21 and l1

43666 L1
L22 43 L21 AND L1

=> d l22 33-43 ti

L22 ANSWER 33 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Hydrogenation catalysts for oxalate diesters

L22 ANSWER 34 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Hydrogenolysis of carboxylic acid esters

L22 ANSWER 35 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Hydrogenation of dimethyl oxalate in the presence of ruthenium carbonyl carboxylates: ethylene glycol formation

L22 ANSWER 36 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Intermediates to ethylene glycol: carbonylation of formaldehyde catalyzed by Nafion solid perfluorosulfonic acid resin

L22 ANSWER 37 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Ethylene glycol and/or glycolic acid ester and catalyst composition used in their production

L22 ANSWER 38 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Ethylene glycol and/or glycolic acid esters, and catalyst for their production

L22 ANSWER 39 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Ethylene glycol

L22 ANSWER 40 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI New MGC process for high-purity carbon monoxide production and review on derivatives of methyl formate

L22 ANSWER 41 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective catalytic hydrogenation of oxalic acid diesters

L22 ANSWER 42 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalyst for ester hydrogenation

L22 ANSWER 43 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN
TI Alkoxy acid or ester preparation

=> d 122 37,38,43 ti fbib abs

L22 ANSWER 37 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN

TI Ethylene glycol and/or glycolic acid ester and catalyst composition used in their production

AN 1983:197597 CAPLUS

DN 98:197597

TI Ethylene glycol and/or glycolic acid ester and catalyst composition used in their production

IN Miyazaki, Haruhiko; Hirai, Koichi; Uda, Taizo; Nakamura, Yasuo; Ikezawa, Harumi; Tsuchie, Takanori

PA Ube Industries, Ltd. , Japan

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 64241	A1	19821110	EP 1982-103454	19820423
	EP 64241	B1	19850904		
	R: BE, DE, FR, IT, NL				
	JP 57180432	A2	19821106	JP 1981-64015	A 19810430
	JP 60045938	B4	19851012	JP 1981-64015	19810430
	US 4440873	A	19840403	US 1982-370555	19820421
				JP 1981-64015	A 19810430
	GB 2099715	A	19821215	GB 1982-11966	19820426
	GB 2099715	B2	19841212		
				JP 1981-64015	A 19810430
	CA 1187067	A1	19850514	CA 1982-401643	19820426
				JP 1981-64015	A 19810430
	AU 8283046	A1	19821104	AU 1982-83046	19820427
	AU 545198	B2	19850704		
				JP 1981-64015	A 19810430
	ZA 8202887	A	19830330	ZA 1982-2887	19820428
				JP 1981-64015	A 19810430
	BR 8202478	A	19830412	BR 1982-2478	19820429
				JP 1981-64015	A 19810430
	IN 157792	A	19860621	IN 1982-CA481	19820430
				JP 1981-64015	A 19810430
	US 4585890	A	19860429	US 1984-586753	19840306
				JP 1981-64015	A 19810430
				US 1982-370555	A3 19820421

OS CASREACT 98:197597

AB Oxalates were hydrogenated in the presence of a Cu-containing catalyst, prepared

by reduction of Cu ammine complex supported on silica gel. Thus MeO₂CCO₂Me was hydrogenated at 201°, space velocity 6150/h, with 100% conversion, forming 97.2% HOCH₂CH₂OH and 0.7% MeO₂CCH₂OH.

L22 ANSWER 38 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN

TI Ethylene glycol and/or glycolic acid esters, and catalyst for their production

AN 1982:615578 CAPLUS

DN 97:215578

TI Ethylene glycol and/or glycolic acid esters, and catalyst for their production

IN Miyazaki, Haruhiko; Hirai, Koichi; Uda, Taizo; Nakamura, Yasuo; Ikezawa, Harumi; Tsuchie, Takanori

PA Ube Industries, Ltd. , Japan

SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 57010	A1	19820804	EP 1982-100517	19820126
	EP 57010	B1	19841024		
	R: BE, DE, FR, GB, IT, NL				
	JP 57122940	A2	19820731	JP 1981-9059	A 19810126
	JP 61002015	B4	19860122	JP 1981-9059	19810126
	CA 1182808	A1	19850219	CA 1982-394849	19820125
				JP 1981-9059	A 19810126
	US 4551565	A	19851105	US 1983-510387	19830705
				JP 1981-9059	A 19810126
				US 1982-341237	A1 19820121

OS CASREACT 97:215578

AB Oxalate diesters were hydrogenated over CuMonBamOp ($n = 0-3$, $m = 0-6$, $n \neq m = 0$; p = number to fill valences) at $120-300^\circ$ at $0.1-200$ atm gauge. Thus, EtO₂CCO₂Et was hydrogenated over a Cu oxide-Mo oxide-BaO catalyst (Cu-Mo-Ba atomic ratio 1:0.01:0.01) at 190° at atmospheric pressure to give HOCH₂CH₂OH and a small amount of HOCH₂CO₂Et; a catalyst with a Cu-Mo-Ba atomic ratio of 1:2:2 gave HOCH₂CO₂Et only.

L22 ANSWER 43 OF 43 CAPLUS COPYRIGHT 2005 ACS on STN

TI Alkoxy acid or ester preparation

AN 1976:405210 CAPLUS

DN 85:5210

TI Alkoxy acid or ester preparation

IN Suzuki, Shigeto

PA Chevron Research Co., USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3948977	A	19760406	US 1974-532563	19741213
				US 1974-532563	A 19741213

AB About 12 hydroxy-, acetoxy-, or alkoxyacetic acids and/or their esters were prepared by reaction of HCHO with CO and H₂O, AcOH, or alc., resp., and using HF as a catalyst. Thus, an autoclave was charged with HCHO, MeOH, and HF and then pressurized to 1000 psig at 10° with CO. The temperature was raised to 34° over 90 min to give a product containing MeOCH₂CO₂Me (I) 43, MeOCH₂CO₂H (II) 42, and HOCH₂CO₂Me 14%. Similar reaction of CH₂(OMe)₂ with CO gave a product containing I 95 and II 5%. Reaction of HCHO with CO and HOCH₂CH₂OH gave 80% oxo-p-dioxane.

=> oxid?

L23 2754075 OXID?

=> l22 and l23

L24 19 L22 AND L23

=> d l24 10-19 ti

L24 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of high-purity α -hydroxy carboxylic acids from diols

L24 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -hydroxy carboxylic acid esters from diols

L24 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for producing diol derivatives

L24 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Catalysts for carboxylic ester production and processes for producing carboxylic esters

L24 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for preparation of α -hydroxycarboxylic acid ester using solid acidic catalysts

L24 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Reactions of α -hydroxy carbonyl compounds with azodicarboxylates and triphenylphosphine: synthesis of α -N-hydroxy amino acid derivatives

L24 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hydrogenolysis of carboxylic acid esters

L24 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Ethylene glycol and/or glycolic acid esters, and catalyst for their production

L24 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Ethylene glycol

L24 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Catalyst for ester hydrogenation

=> d 124 10-14 ti fbib abs

L24 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 AN 2004:117794 CAPLUS
 DN 140:163469
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 IN Hayashi, Toshio; Baba, Hideyuki
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,				

TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2002-204784 A 20020712
JP 2004043682 A2 20040212 JP 2002-204784 20020712
FAN 2004:117793
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2004043385 A2 20040212 JP 2002-204748 20020712
US 2004138409 A1 20040715 US 2003-618491 20030711
JP 2002-204748 A 20020712
JP 2002-204754 A 20020712
JP 2002-204784 A 20020712

AB α -Hydroxy carboxylic acids, which are free from HCHO and Cl and useful for cosmetics (no data), are prepared by reaction of 1,2-diols and optional primary alcs. with O in the presence of metal-containing catalysts and hydrolysis of esters. Ethylene glycol and MeOH were treated with an O-N mixture in the presence of Pb-Au alloy/TiO₂-SiO₂ catalyst at 90° for 5 h to give a reaction mixture, which was filtered for removal of the catalyst, treated with Mg glycolate/MeOH for removal oxalate, and distilled to give Me glycolate with $\geq 98\%$ purity. Hydrolysis of the Me glycolate gave glycolic acid in 100% yield.

L24 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of α -hydroxy carboxylic acid esters from diols
AN 2004:117793 CAPLUS
DN 140:163472
TI Preparation of α -hydroxy carboxylic acid esters from diols
IN Hayashi, Toshio; Baba, Hideyuki
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 3

PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2004043385 A2 20040212 JP 2002-204748 20020712
US 2004138409 A1 20040715 US 2003-618491 20030711
JP 2002-204748 A 20020712
JP 2002-204754 A 20020712
JP 2002-204784 A 20020712

PATENT FAMILY INFORMATION:
FAN 2004:60446

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2004007422 A1 20040122 WO 2003-JP8699 20030709

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2002-204784 A 20020712
JP 2004043682 A2 20040212 JP 2002-204784 20020712
FAN 2004:117794
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acid esters are prepared from 1,2-diols or 1,2-diols and primary alcs. by oxygenation in the presence of metal-containing catalysts. Ethylene glycol and MeOH were heated under N/O in the presence of Au/Al-SiO₂ catalyst at 90° for 4 h to give Me glycolate and 2-hydroxymethyl glycolate with 82.5 and 14.6% selectivity, resp., at 64.8% conversion.

L24 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for producing diol derivatives

AN 2004:60446 CAPLUS

DN 140:111823

TI Process for producing diol derivatives

IN Hayashi, Toshio; Baba, Hideyuki

PA Nippon Shokubai Co., Ltd., Japan

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2004043682	A2	20040212	JP 2002-204784	A 20020712
				JP 2002-204784	20020712

PATENT FAMILY INFORMATION:

FAN 2004:117793

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

FAN 2004:117794

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB 1,2-Diols or 1,2-diols containing a primary alc. are **oxidized** with O in the presence of metal catalysts on supports to obtain α -hydroxycarboxylic esters. Thus, ethylene glycol (I) 3.1, methanol 15, and Au/Al-SiO₂ 1.5 g were stirred in an autoclave, pressured with 0.2 MPa N and 0.3 MPa O, and heated 4 h at 90° to give 82.5% Me glycolate at I conversion 64.8%.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalysts for carboxylic ester production and processes for producing
carboxylic esters
AN 2002:946180 CAPLUS
DN 138:25063
TI Catalysts for carboxylic ester production and processes for producing
carboxylic esters
IN Hayashi, Toshio; Inagaki, Takahiro
PA Nippon Shokubai Co., Ltd., Japan
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002098558	A1	20021212	WO 2002-JP5496	20020604
	W:				
				AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
				JP 2001-167739	A 20010604
				JP 2001-294233	A 20010926
	JP 2003093876	A2	20030402	JP 2001-294233	20010926
	US 2003060655	A1	20030327	US 2002-162040	20020603
				JP 2001-167739	A 20010604
				JP 2001-294233	A 20010926
	JP 2003053188	A2	20030225	JP 2002-163348	20020604
				JP 2001-167739	A 20010604
	EP 1393800	A1	20040303	EP 2002-733287	20020604
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR	
				JP 2001-167739	A 20010604
				JP 2001-294233	A 20010926
				WO 2002-JP5496	W 20020604

AB Aldehydes and alcs. or ≥ 1 alc. and O react to prepare esters using Au optionally containing a 2nd element having diameter < 6 nm on supports as catalysts. Thus, 1.5 mL methacrolein, 15 mL methanol, 0.5 g 4.6% Au/ γ -alumina, and 0.2 MPa O in an autoclave were stirred at 80° for 2 h to prepare Me methacrylate at selectivity 85, yield 75, and methacrolein conversion 88%.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for preparation of α -hydroxycarboxylic acid ester using
solid acidic catalysts
AN 1997:678666 CAPLUS
DN 127:318708
TI Process for preparation of α -hydroxycarboxylic acid ester using
solid acidic catalysts
IN Arita, Yoshio; Ota, Akihiko; Hasebe, Muraji; Saito, Noboru
PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09268156	A2	19971014	JP 1996-80351	19960402
				JP 1996-80351	19960402

OS CASREACT 127:318708

AB Characterized is a process for preparation of the title compds. by gas phase reacting α -oxoaldehydes with alcs. over solid acidic catalysts in the presence of O. This process produces the title compds. in an industrial manner efficiently and economically. Thus, HCOCOH (preparation given) was reacted with MeOH in the presence of O and aluminum phosphate at 240° to give 74.8% HOCH₂CO₂Me.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	59.54	286.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.84	-29.20

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 08:01:36 ON 30 JUN 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 08:56:23 ON 30 JUN 2005
FILE 'CAPLUS' ENTERED AT 08:56:23 ON 30 JUN 2005
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	59.54	286.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.84	-29.20

=> logoff holf

'HOLF' IS NOT VALID HERE

For an explanation, enter "HELP LOGOFF".

=> logoff hold

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	ENTRY	SESSION
FULL ESTIMATED COST	59.99	286.58
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.84	-29.20

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STN INTERNATIONAL SESSION SUSPENDED AT 08:56:45 ON 30 JUN 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

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PASSWORD:

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SESSION RESUMED IN FILE 'CAPLUS' AT 09:02:09 ON 30 JUN 2005
FILE 'CAPLUS' ENTERED AT 09:02:09 ON 30 JUN 2005
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	59.99	286.58
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.84	-29.20

=> d his

(FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005)

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005

E ETHYLENE GLYCOL/CN
L1 1 E3
E HYDROXYACETIC ACID/CN
L2 1 E3

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005

L3 8885 L1/RCT
L4 639 L2/PREP
L5 45 L3 AND L4
SAVE TEMP L5 HAFROMEGCMPD/A
L6 952741 LEAD OR PB
L7 264341 GOLD OR AU
L8 34547 L6 AND L7
L9 3 L8 AND L5
L10 13 L5 AND L7
L11 10 L10 NOT L9
L12 15377 ?GLYCOLATE
L13 424 L1 AND L7
L14 30 L12 AND L13
L15 786227 ESTER
L16 16 L14 AND L15

FILE 'REGISTRY' ENTERED AT 07:52:26 ON 30 JUN 2005

E METHYL GLYCOLATE/CN
L17 1 E3
E ETHYL GLYCOLATE/CN
L18 1 E3

FILE 'CAPLUS' ENTERED AT 07:53:21 ON 30 JUN 2005

L19 122 L17/PREP
L20 41 L18/PREP

L21 148 L19 OR L20
L22 43 L21 AND L1
L23 2754075 OXID?
L24 19 L22 AND L23

=> d 124 1-10 ti

L24 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Manufacture of α -hydroxy carboxylic acid esters from diols, alcohols, and oxygen

L24 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for preparation of α -hydroxycarboxylic acid esters

L24 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of carboxylic acid esters from alcohols using supported noble metal catalysts and basic compounds, and regeneration of the catalysts

L24 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for manufacture of α -hydroxycarboxylic acid ester

L24 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification and manufacture of glycolic acid ester

L24 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

L24 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for purification and manufacture of glycolic acid ester

L24 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of α -oxo carboxylic acids and their esters

L24 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification of glycolic acid and derivatives thereof

L24 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of high-purity α -hydroxy carboxylic acids from diols

=> d 124 4-6 ti fbib abs

L24 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for manufacture of α -hydroxycarboxylic acid ester
AN 2004:354284 CAPLUS
DN 140:375670
TI Process for manufacture of α -hydroxycarboxylic acid ester
IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131410	A2	20040430	JP 2002-296636	20021009
				JP 2002-296636	20021009
AB	In the manufacture of α -hydroxycarboxylic acid ester by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the reaction product is distilled; the pH of said reaction product is adjusted to 5 - 9 before distillation, or the pH in the				

distillation system is adjusted to 5 - 9. The title process is highly efficient.

L24 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for purification and manufacture of glycolic acid ester

AN 2004:351617 CAPLUS

DN 140:375669

TI Process for purification and manufacture of glycolic acid ester

IN Yoshida, Hiroshi; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131411	A2	20040430	JP 2002-296643	20021009
				JP 2002-296643	20021009

OS MARPAT 140:375669

AB The process for distillation of a mixture containing glycolic acid ester is done while

an alc. is supplied to the distillation system; said alc. (ROH) corresponds to CO₂R [R = hydrocarbon] of said ester. In the manufacture of glycolic acid ester from ethylene glycol or ethylene glycol and an alc. in the presence of oxygen, the reaction product mixture is distilled; the distillation of said mixture

is done as described above. The title process is highly efficient and inhibits the formation of byproducts.

L24 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

AN 2004:351616 CAPLUS

DN 140:375668

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei; Kitada, Ritsuo; Kakimoto, Yukihiro

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009

JP 2002-350987 A 20021203
 JP 2002-350994 A 20021203
 JP 2002-350997 A 20021203
 JP 2002-158809 A 20030604

FAN 2004:490810

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004182643	A2	20040702	JP 2002-350987	20021203
JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004182644	A2	20040702	JP 2002-350994	20021203
US 2005090686	A1	20050428	US 2003-680919	20031008
			JP 2002-296621	A 20021009
			JP 2002-296623	A 20021009
			JP 2002-350987	A 20021203
			JP 2002-350994	A 20021203
			JP 2002-350997	A 20021203
			JP 2002-158809	A 20030604

FAN 2005:371052

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005090686	A1	20050428	US 2003-680919	20031008
			JP 2002-296621	A 20021009
			JP 2002-296623	A 20021009
			JP 2002-350987	A 20021203
			JP 2002-350994	A 20021203
			JP 2002-350997	A 20021203
			JP 2002-158809	A 20030604
JP 2004131408	A2	20040430	JP 2002-296621	20021009
JP 2004131409	A2	20040430	JP 2002-296623	20021009
JP 2004182643	A2	20040702	JP 2002-350987	20021203
JP 2004182644	A2	20040702	JP 2002-350994	20021203
JP 2004182645	A2	20040702	JP 2002-350997	20021203

AB In the manufacture of α -hydroxycarboxylic acid ester (I) by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the liquid containing the reaction product is distilled, and I

is collected ; in the distillation of the liquid containing the reaction product, said

liquid is made into a thin film which is heated by contact with the heating surface. In the method for purification of the title compound by distillation, the

mixture to be distilled is made into a thin film which is heated by contact with the heating surface. Me glycolate with 98% purity was obtained by the title methods.

=> d 124 8 ti fbib abs

L24 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -oxo carboxylic acids and their esters
 AN 2004:305393 CAPLUS
 DN 140:303317
 TI Preparation of α -oxo carboxylic acids and their esters
 IN Yoshida, Hiroshi; Ariyoshi, Kimio; Hayashi, Toshio
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2004115426	A2	20040415	JP 2002-280484	20020926
				JP 2002-280484	20020926

AB Title compds. are prepared by reaction of 1,2-diols or 1,2-diols with alcs. in the presence of O, dehydrogenation of α -hydroxy carboxylic acid esters in the presence of O, and optional hydrolysis. Ethylene glycol was treated with MeOH in the presence of Au/Al-SiO₂ catalyst at 90° for 5 h to give Me glycolate, which was **oxidized** by O using Na₃(PMo₁₂O₄₀).nH₂O/TSS 2S (SiC) at 230° for 6 h to give 94.4% Me glyoxylate.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	82.14	308.73
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-8.76	-32.12

SESSION WILL BE HELD FOR 60 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 09:04:49 ON 30 JUN 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
 SESSION RESUMED IN FILE 'CAPLUS' AT 09:35:05 ON 30 JUN 2005
 FILE 'CAPLUS' ENTERED AT 09:35:05 ON 30 JUN 2005
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	82.59	309.18
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-8.76	-32.12

=> d his

(FILE 'HOME' ENTERED AT 06:41:35 ON 30 JUN 2005)

FILE 'REGISTRY' ENTERED AT 06:41:56 ON 30 JUN 2005

E ETHYLENE GLYCOL/CN

L1 1 E3

E HYDROXYACETIC ACID/CN

L2 1 E3

FILE 'CAPLUS' ENTERED AT 06:43:10 ON 30 JUN 2005

L3 8885 L1/RCT

L4 639 L2/PREP

L5 45 L3 AND L4

SAVE TEMP L5 HAFROMEGCMPD/A

L6 952741 LEAD OR PB

L7 264341 GOLD OR AU

L8 34547 L6 AND L7

L9 3 L8 AND L5

L10 13 L5 AND L7

L11 10 L10 NOT L9

L12 15377 ?GLYCOLATE

L13 424 L1 AND L7

L14 30 L12 AND L13

L15 786227 ESTER

L16 16 L14 AND L15

FILE 'REGISTRY' ENTERED AT 07:52:26 ON 30 JUN 2005

E METHYL GLYCOLATE/CN

L17 1 E3

E ETHYL GLYCOLATE/CN

L18 1 E3

FILE 'CAPLUS' ENTERED AT 07:53:21 ON 30 JUN 2005

L19 122 L17/PREP

L20 41 L18/PREP

L21 148 L19 OR L20

L22 43 L21 AND L1

L23 2754075 OXID?

L24 19 L22 AND L23

=> hydrog?

L25 1158420 HYDROG?

=> 122 not 125

L26 23 L22 NOT L25

=> 126 not 124

L27 9 L26 NOT L24

=> d 127 1-9 ti

L27 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method for producing alpha-hydroxycarboxylate ester

L27 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method for stabilization of glycolic acid ester

L27 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Use of bottom liquid of glycolic acid ester distillation tower

L27 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of α -hydroxycarboxylic acids

L27 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Carbonylation of formaldehyde over ion exchange resin catalysts. 1.
Batch reactor studies

L27 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of cyclic dioxanones by cyclocondensation of paraformaldehyde
with diols and carbon monoxide

L27 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
TI Glycolic acid esters

L27 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
TI Alkyl glycolates

L27 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
TI New MGC process for high-purity carbon monoxide production and review on
derivatives of methyl formate

=> d l27 1,7,8 ti fbib abs

L27 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
TI Method for producing alpha-hydroxycarboxylate ester
AN 2005:371052 CAPLUS
DN 142:413303
TI Method for producing alpha-hydroxycarboxylate ester
IN Yoshida, Hiroshi; Tsuneki, Hideaki; Hayashi, Toshio; Baba, Hideyuki;
Inagaki, Takahiro; Nakagawa, Satoshi; Kakimoto, Yukihiro; Kitada, Ritsuo;
Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:351616

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

AB The present invention provides a process for more efficiently producing an α -hydroxycarboxylic acid ester (e.g., glycolic acid Me ester) wherein side reactions due to the α -hydroxycarboxylic acid ester are inhibited or prevented in comparison with prior art production processes. The process comprises steps of: (1) reacting, in the presence of oxygen, (i) a 1,2-diol (e.g., ethylene glycol) with a 1,2-diol or (ii) a 1,2-diol with an alc. (MeOH) to obtain a reaction product containing an α -hydroxycarboxylic acid ester, (2) separating the α -hydroxycarboxylic acid ester from the reaction product obtained in (1) by distillation under reduced pressure, and (3) feeding step 1 with a mixture obtained by partially or entirely removing water from the reaction product, wherein the mixture contains an unreacted 1,2-diol and/or alc.

L27 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Glycolic acid esters

AN 1987:66759 CAPLUS

DN 106:66759

TI Glycolic acid esters

IN Moll, Karl Klaus; Derdulla, Hans Joachim; Jauch, Ruth; Voigt, Hiltrud

PA VEB Leuna-Werke "Walter Ulbricht", Ger. Dem. Rep.

SO Ger. (East), 4 pp.

CODEN: GEXXA8

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	DD 236727	A1	19860618	DD 1985-275754	19850430
				DD 1985-275754	19850430

OS CASREACT 106:66759

AB A process for producing glycolic acid esters by reaction of HCHO-releasing substances with CO and an alc. in 2 reaction steps in a liquid medium at 353-403K/0.1-20 MPa on acidic fixed bed catalysts is characterized in that the the HCHO-releasing substances, which are dissolved or dispersed in a low boiling solvent, are reacted with CO-containing gases in the absence of H2O on a strongly acidic cation exchanger, whereby the cation exchanger is a styrene-divinylbenzene copolymer with canal structure that has protonated SO3H groups with a total weight capacity of > 4.4 mequivs/g, and is used in a weight ratio of 1:1 to 3:1, based on the HCHO-releasing substance. After the reaction, excess CO and the inert diluent are drawn from the reaction mixture, whereby the reaction residue is treated with excess alc. in the first reaction step and is esterified on the cation exchanger in a second reaction step, the cation exchanger is separated mech., and the glycolic acid ester is distilled Me and Bu glycolates were prepared from trioxane or paraformaldehyde, CO, and MeOH or BuOH in 46.6-83.0% yields.

L27 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Alkyl glycolates

AN 1986:552551 CAPLUS

DN 105:152551

TI Alkyl glycolates

IN Yeakey, Ernest L.; Sanderson, John R.

PA Texaco Inc. , USA

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 4602102	A	19860722	US 1984-683546	19841219
				US 1984-683546	19841219
AB	The title compds. were prepared by the reaction of (MeO)2CH2 with HCO2H in presence of an organic peroxide under nonacidic conditions. A minor amount of HOCH2CH2OH is also produced in the reaction. Thus, (MeO)2CH2, paraformaldehyde, and Me3COOCMe3 were heated for 2 h at 130° and then for 1 h at 150° to give HOCH2CO2Et, HOCH2CO2Me, and HOCH2CH2OH.				

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

105.01

331.60

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-10.95

-34.31

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 09:39:23 ON 30 JUN 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

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NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	4	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	5	MAR 02	GBFULL: New full-text patent database on STN
NEWS	6	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	8	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	9	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	10	MAR 22	PATDPASPC - New patent database available
NEWS	11	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	12	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	13	APR 04	EMBASE - Database reloaded and enhanced
NEWS	14	APR 18	New CAS Information Use Policies available online
NEWS	15	APR 25	Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS	16	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS
NEWS	17	MAY 23	GBFULL enhanced with patent drawing images
NEWS	18	MAY 23	REGISTRY has been enhanced with source information from CHEMCATS
NEWS	19	JUN 06	The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available
NEWS	20	JUN 13	RUSSIAPAT: New full-text patent database on STN
NEWS	21	JUN 13	FRFULL enhanced with patent drawing images
NEWS	22	JUN 27	MARPAT displays enhanced with expanded G-group definitions and text labels
NEWS	23	JUL 01	MEDICONF removed from STN
NEWS	24	JUL 07	STN Patent Forums to be held in July 2005
NEWS	25	JUL 13	SCISEARCH reloaded
NEWS	26	JUL 20	Powerful new interactive analysis and visualization software, STN AnaVist, now available
NEWS EXPRESS	JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005		
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS INTER	General Internet Information		
NEWS LOGIN	Welcome Banner and News Items		
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN		
NEWS WWW	CAS World Wide Web Site (general information)		

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 12:16:20 ON 01 AUG 2005

=> ff hold

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 12:16:30 ON 01 AUG 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *

SESSION RESUMED IN FILE 'HOME' AT 12:25:02 ON 01 AUG 2005

FILE 'HOME' ENTERED AT 12:25:02 ON 01 AUG 2005

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

=> file reg

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 12:25:51 ON 01 AUG 2005

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STRUCTURE FILE UPDATES: 29 JUL 2005 HIGHEST RN 857722-60-2

DICTIONARY FILE UPDATES: 29 JUL 2005 HIGHEST RN 857722-60-2

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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*
 * The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
 * available and contains the CA role and document type information. *
 *

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> e ethylen glycol/cn

E1	1	ETHYLDURENE/CN
E2	1	ETHYLEMIN/CN
E3	0 -->	ETHYLEN GLYCOL/CN
E4	1	ETHYLEN-D4-IMINE/CN
E5	1	ETHYLENAMINE/CN
E6	1	ETHYLENE/CN
E7	1	ETHYLENE (.CH2CH2.), TRIBROMO-/CN
E8	1	ETHYLENE (13CCH4)/CN
E9	1	ETHYLENE (2,2,6,6-TETRAMETHYL-4-PIPERIDINYLDENE)ACETATE/CN
E10	1	ETHYLENE (2-(4,6-DIAMINO-S-TRIAZIN-2-YL)ETHYL) PHOSPHONATE/CN
E11	1	ETHYLENE (ALLYL CARBONATE) POLYMER/CN
E12	1	ETHYLENE (FREE RADICAL), 1,2-BIS(4-BIPHENYLYL)-1,2-DISTYRYL-/CN

=> e ethylene glycol/cn

E1	1	ETHYLENE GERMANATE(IV)/CN
E2	1	ETHYLENE GLYCOL-MAGNESIUM BIS(2-HYDROXYETHYL PHTHALATE)-MALEIC ANHYDRIDE-PHTHALIC ANHYDRIDE-PROPYLENE GLYCOL POLYMER/CN
E3	1 -->	ETHYLENE GLYCOL/CN
E4	1	ETHYLENE GLYCOL (13C2H6O2)/CN
E5	1	ETHYLENE GLYCOL (2,4,5-TRICHLOROPHENOXY)ACETATE/CN
E6	1	ETHYLENE GLYCOL (2-CHLORO-4-AMINOPHENYL) ETHER SULFURIC ACID ESTER/CN
E7	1	ETHYLENE GLYCOL (3-CHLORO-4-AMINOPHENYL) ETHER SULFURIC ACID ESTERS/CN
E8	1	ETHYLENE GLYCOL (3-METHYL-4-AMINOPHENYL) ETHER SULFURIC ACID ESTER/CN
E9	1	ETHYLENE GLYCOL A,A-DIHYDROPERFLUOROBUTYL ETHER/CN
E10	1	ETHYLENE GLYCOL A,A-DIHYDROPERFLUOROCTYL ETHER/CN
E11	1	ETHYLENE GLYCOL A-D-GLUCOPYRANOSIDE/CN
E12	1	ETHYLENE GLYCOL 1,1,7-TRIHYDROPERFLUOROHEPTYL ETHER/CN

=> e3

L1	1	"ETHYLENE GLYCOL"/CN
----	---	----------------------

=> e polyglycolic acid/cn

E1	1	POLYGLYCOLAMINE H 163/CN
E2	1	POLYGLYCOLDIAMINE H 221/CN
E3	1 -->	POLYGLYCOLIC ACID/CN
E4	1	POLYGLYCOLIC ACID FIBER/CN
E5	1	POLYGLYCOLIC ACID-CASEIN HYDROLYZATE MIXT./CN
E6	2	POLYGLYCOLIDE/CN
E7	1	POLYGLYCOLIDE ESTER WITH GLYCEROL/CN
E8	1	POLYGLYCOLIDE, SRU/CN

E9	1	POLYGLYCOLIDE, SRU GLYCEROL-TERMINATED/CN
E10	1	POLYGLYCOLIDE-POLYLACTIDE FIBER/CN
E11	1	POLYGLYCONATE/CN
E12	1	POLYGLYCOPEX/CN

=> e3

L2 1 "POLYGLYCOLIC ACID"/CN

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	10.06	10.27

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 FILE LAST UPDATED: 31 Jul 2005 (20050731/ED)

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=> 11

L3 43868 L1

=> 12

L4 2302 L2

=> 13/rct

FIELD CODES CANNOT BE CHANGED HERE

You may have tried to apply a field code to a term that already has a field code. You can only add a field code to a term that has no field code appended to it.

=> 11/rct

	43868 L1
	2755814 RCT/RL
L5	8922 L1/RCT
	(L1 (L) RCT/RL)

=> 12/prd

'PRD' IS NOT A VALID CROSSOVER QUALIFIER FOR L2

Answer sets created in a different file may be field qualified with a limited set of qualifiers. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

=> 12/prod

'PROD' IS NOT A VALID CROSSOVER QUALIFIER FOR L2

Answer sets created in a different file may be field qualified with a limited set of qualifiers. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

=> l2/prep

2302 L2
3336930 PREP/RL
L6 216 L2/PREP
(L2 (L) PREP/RL)

=> l5 and l6

L7 3 L5 AND L6

=> d l7 1-3 ti fbib abs

L7 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Hydroxy-terminated α -hydroxycarboxylic acid condensates with high molecular weight and preparation thereof

AN 2004:1125570 CAPLUS

DN 142:56870

TI Hydroxy-terminated α -hydroxycarboxylic acid condensates with high molecular weight and preparation thereof

IN Tsuneki, Hideaki; Yoshida, Hiroshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004359785	A2	20041224	JP 2003-158809	20030604
				JP 2003-158809	20030604

AB In the condensates consisting of condensed α -hydroxycarboxylic acid parts (OCOCHR)O (R = H, C1-5 alkyl) and 1,2-alkanediol chains (OCH2CHR)O (R = same as above), the both terminals are OCOCHROH (R = same as above) or OCHRCO2CH2CHROH (R = same as above). The condensates are manufactured by condensation of hydroxyalkyl α -hydroxycarboxylates HOCHRCH2OCOCHROH (R = same as above), removing 1,2-alkanediols. The hydroxyalkyl α -hydroxycarboxylates may be prepared by oxidation of 1,2-alkanediols HOCHRCH2OH (R = same as above) with mol. O in the presence of catalysts and subsequent removal of generated water and unreacted diols. Mol. weight of the condensates can be easily increased. Thus, ethylene glycol (EG) was subjected to oxidative esterification in the presence of Au/TiO2-SiO2 catalyst to give 2-hydroxyethyl glycolate mixture containing glycolic acid and unreacted EG. After removing water and EG, the mixture was condensed during removing EG to give a hydroxy-terminated polymer with m.p. 182° and Mw 10,800.

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for producing diol derivatives

AN 2004:60446 CAPLUS

DN 140:111823

TI Process for producing diol derivatives

IN Hayashi, Toshio; Baba, Hideyuki

PA Nippon Shokubai Co., Ltd., Japan

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2004007422 A1 20040122 WO 2003-JP8699 20030709
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
JP 2002-204784 A 20020712
JP 2004043682 A2 20040212 JP 2002-204784 20020712
EP 1553076 A1 20050713 EP 2003-741296 20030709
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
JP 2002-204784 A 20020712
WO 2003-JP8699 W 20030709

PATENT FAMILY INFORMATION:

FAN 2004:117793

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

FAN 2004:117794

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB 1,2-Diols or 1,2-diols containing a primary alc. are oxidized with O in the presence of metal catalysts on supports to obtain α -hydroxycarboxylic esters. Thus, ethylene glycol (I) 3.1, methanol 15, and Au/Al-SiO₂ 1.5 g were stirred in an autoclave, pressured with 0.2 MPa N and 0.3 MPa O, and heated 4 h at 90° to give 82.5% Me glycolate at I conversion 64.8%.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Expanding the Catalytic Activity of Nucleophilic N-Heterocyclic Carbenes for Transesterification Reactions

AN 2003:20771 CAPLUS

DN 138:205454

TI Expanding the Catalytic Activity of Nucleophilic N-Heterocyclic Carbenes for Transesterification Reactions

AU Nyce, Gregory W.; Lamboy, Jorge A.; Connor, Eric F.; Waymouth, Robert M.; Hedrick, James L.

CS Center for Polymer Interfaces and Macromolecular Assemblies, IBM Almaden Research, San Jose, CA, 95120, USA

SO Organic Letters (2002), 4(21), 3587-3590

CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

AB Currently, there is a renewed interest in reactions that are catalyzed by organic compds. Typical organic catalysts for acylation or transesterification reactions are based on either nucleophilic tertiary amines or phosphines.

This communication discusses the use of nucleophilic N-heterocyclic
carbenes as efficient transesterification catalysts. These relatively
unexplored and highly versatile organic catalysts were found to be mild,
selective, and more active than traditional organic nucleophiles.
RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> alkyl glycolate

552659 ALKYL
6164 ALKYL
555441 ALKYL
(ALKYL OR ALKYL)
8031 GLYCOLATE
536 GLYCOLATES
8263 GLYCOLATE
(GLYCOLATE OR GLYCOLATES)
L8 50 ALKYL GLYCOLATE
(ALKYL(W) GLYCOLATE)

=> alkylglycolate

5 ALKYLGLYCOLATE
2 ALKYLGLYCOLATES
L9 7 ALKYLGLYCOLATE
(ALKYLGLYCOLATE OR ALKYLGLYCOLATES)

=> methyl glycolate

935846 METHYL
645 METHYL
936237 METHYL
(METHYL OR METHYL)
888272 ME
10068 MES
894447 ME
(ME OR MES)
1511442 METHYL
(METHYL OR ME)
8031 GLYCOLATE
536 GLYCOLATES
8263 GLYCOLATE
(GLYCOLATE OR GLYCOLATES)
L10 396 METHYL GLYCOLATE
(METHYL(W) GLYCOLATE)

=> d his

(FILE 'HOME' ENTERED AT 12:16:20 ON 01 AUG 2005)

FILE 'REGISTRY' ENTERED AT 12:25:51 ON 01 AUG 2005

E ETHYLEN GLYCOL/CN
E ETHYLENE GLYCOL/CN
L1 1 E3
E POLYGLYCOLIC ACID/CN
L2 1 E3

FILE 'CAPLUS' ENTERED AT 12:26:59 ON 01 AUG 2005

L3 43868 L1
L4 2302 L2
L5 8922 L1/RCT
L6 216 L2/PREP
L7 3 L5 AND L6
L8 50 ALKYL GLYCOLATE
L9 7 ALKYLGLYCOLATE

L10 396 METHYL GLYCOLATE

=> 15 and 110

L11 23 L5 AND L10

=> 15(1)110

L12 1 L5(L)L10

=> d 112

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:588210 CAPLUS

DN 141:124117

TI Method for stabilization of glycolic acid ester

IN Yoshida, Hiroshi; Nakagawa, Satoshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004203743	A2	20040722	JP 2002-351003	20021203
PRAI	JP 2002-321286	A	20021105		
OS	MARPAT 141:124117				

=> d 111 10-23 ti

L11 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of α -oxo carboxylic acids and their esters

L11 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for purification of glycolic acid and derivatives thereof

L11 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of high-purity α -hydroxy carboxylic acids from diols

L11 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of α -hydroxy carboxylic acid esters from diols

L11 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for producing diol derivatives

L11 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of purinone derivatives as dipeptidylpeptidase IV (DPP-IV) inhibitors

L11 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Catalysts for carboxylic ester production and processes for producing carboxylic esters

L11 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of phenyloxoazapropylcycloalkane derivatives and analogs as potassium channel inhibitors

L11 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of α -hydroxycarboxylic acids

L11 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Naphthyridine derivatives of pyrrolidinylpropionic acid and analogs useful as integrin receptor antagonists

L11 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for preparation of α -hydroxycarboxylic acid ester using solid acidic catalysts

L11 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dimethyl-(4-methyl-1-cyclohexenyl)methyl and 2-(1-methylethylidene)-5-methylcyclohexyl ethers from pulegone

L11 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Pronase-catalyzed transacylation in organic solvents

L11 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of cyclic dioxanones by cyclocondensation of paraformaldehyde with diols and carbon monoxide

=> d 111 10-14 ti fbib abs

L11 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -oxo carboxylic acids and their esters
 AN 2004:305393 CAPLUS
 DN 140:303317
 TI Preparation of α -oxo carboxylic acids and their esters
 IN Yoshida, Hiroshi; Ariyoshi, Kimio; Hayashi, Toshio
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004115426	A2	20040415	JP 2002-280484	20020926
				JP 2002-280484	20020926

AB Title compds. are prepared by reaction of 1,2-diols or 1,2-diols with alcs. in the presence of O, dehydrogenation of α -hydroxy carboxylic acid esters in the presence of O, and optional hydrolysis. Ethylene glycol was treated with MeOH in the presence of Au/Al-SiO₂ catalyst at 90° for 5 h to give **Me glycolate**, which was oxidized by O using Na₃(PMo₁₂O₄₀).nH₂O/TSS 2S (SiC) at 230° for 6 h to give 94.4% Me glyoxylate.

L11 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for purification of glycolic acid and derivatives thereof
 AN 2004:117795 CAPLUS
 DN 140:128821
 TI Process for purification of glycolic acid and derivatives thereof
 IN Hayashi, Toshio
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043387	A2	20040212	JP 2002-204789	20020712
				JP 2002-204789	20020712

AB The title process comprises adding metal salts or ammonium salts to a mixture of oxalic acid ester and/or oxalic acid and glycolic acid and/or glycolic acid ester and separating the oxalic acid metal salts or oxalic acid ammonium salt. The above-mentioned mixture is obtained by oxidation of

ethylene glycol by oxygen in presence of an alc. (e.g., methanol) and a catalyst. **Me glycolate** (purity 98%) was obtained by the title method.

L11 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 AN 2004:117794 CAPLUS
 DN 140:163469
 TI Preparation of high-purity α -hydroxy carboxylic acids from diols
 IN Hayashi, Toshio; Baba, Hideyuki
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-204784	A 20020712
	JP 2004043682	A2	20040212	JP 2002-204784	20020712
	EP 1553076	A1	20050713	EP 2003-741296	20030709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
				JP 2002-204784	A 20020712
				WO 2003-JP8699	W 20030709

FAN 2004:117793

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acids, which are free from HCHO and Cl and useful for cosmetics (no data), are prepared by reaction of 1,2-diols and optional primary alcs. with O in the presence of metal-containing catalysts and hydrolysis of esters. Ethylene glycol and MeOH were treated with an O-N mixture in the presence of Pb-Au alloy/TiO₂-SiO₂ catalyst at 90° for 5 h to give a reaction mixture, which was filtered for removal of the catalyst, treated with Mg glycolate/MeOH for removal oxalate, and distilled to give **Me glycolate** with $\geq 98\%$ purity. Hydrolysis of the **Me glycolate** gave glycolic acid in 100% yield.

L11 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of α -hydroxy carboxylic acid esters from diols
 AN 2004:117793 CAPLUS
 DN 140:163472
 TI Preparation of α -hydroxy carboxylic acid esters from diols
 IN Hayashi, Toshio; Baba, Hideyuki
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

PATENT FAMILY INFORMATION:

FAN 2004:60446

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-204784	A 20020712
	JP 2004043682	A2	20040212	JP 2002-204784	20020712
	EP 1553076	A1	20050713	EP 2003-741296	20030709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
				JP 2002-204784	A 20020712
				WO 2003-JP8699	W 20030709

FAN 2004:117794

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	A 20020712
				JP 2002-204754	A 20020712
				JP 2002-204784	A 20020712

AB α -Hydroxy carboxylic acid esters are prepared from 1,2-diols or 1,2-diols and primary alcs. by oxygenation in the presence of metal-containing catalysts. Ethylene glycol and MeOH were heated under N/O in the presence of Au/Al-SiO₂ catalyst at 90° for 4 h to give **Me glycolate** and 2-hydroxymethyl glycolate with 82.5 and 14.6% selectivity, resp., at 64.8% conversion.

L11 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Process for producing diol derivatives
 AN 2004:60446 CAPLUS
 DN 140:111823
 TI Process for producing diol derivatives
 IN Hayashi, Toshio; Baba, Hideyuki

PA Nippon Shokubai Co., Ltd., Japan
 SO PCT Int. Appl., 62 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007422	A1	20040122	WO 2003-JP8699	20030709
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2004043682	A2	20040212	JP 2002-204784	20020712
	EP 1553076	A1	20050713	EP 2003-741296	20030709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
				JP 2002-204784	20020712
				WO 2003-JP8699	20030709

PATENT FAMILY INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FAN	2004:117793				
PI	JP 2004043385	A2	20040212	JP 2002-204748	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	20020712
				JP 2002-204754	20020712
				JP 2002-204784	20020712
FAN	2004:117794				
PI	JP 2004043386	A2	20040212	JP 2002-204754	20020712
	US 2004138409	A1	20040715	US 2003-618491	20030711
				JP 2002-204748	20020712
				JP 2002-204754	20020712
				JP 2002-204784	20020712

AB 1,2-Diols or 1,2-diols containing a primary alc. are oxidized with O in the presence of metal catalysts on supports to obtain α -hydroxycarboxylic esters. Thus, ethylene glycol (I) 3.1, methanol 15, and Au/Al-SiO₂ 1.5 g were stirred in an autoclave, pressured with 0.2 MPa N and 0.3 MPa O, and heated 4 h at 90° to give 82.5% **Me glycolate** at I conversion 64.8%.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 111 1-9 ti

L11 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method for producing alpha-hydroxycarboxylate ester

L11 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method for stabilization of glycolic acid ester

L11 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Manufacture of α -hydroxy carboxylic acid esters from diols,

alcohols, and oxygen

L11 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Use of bottom liquid of glycolic acid ester distillation tower

L11 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of carboxylic acid esters from alcohols using supported noble metal catalysts and basic compounds, and regeneration of the catalysts

L11 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for manufacture of α -hydroxycarboxylic acid ester

L11 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification and manufacture of glycolic acid ester

L11 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

L11 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for purification and manufacture of glycolic acid ester

=> d l11 1-9 ti fbib abs

L11 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
TI Method for producing alpha-hydroxycarboxylate ester
AN 2005:371052 CAPLUS
DN 142:413303
TI Method for producing alpha-hydroxycarboxylate ester
IN Yoshida, Hiroshi; Tsuneki, Hideaki; Hayashi, Toshio; Baba, Hideyuki; Inagaki, Takahiro; Nakagawa, Satoshi; Kakimoto, Yukihiro; Kitada, Ritsuo; Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203

JP 2002-350997 A 20021203
JP 2002-158809 A 20030604

FAN 2004:351616

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004131409	A2	20040430	JP 2002-296623	20021009
US 2005090686	A1	20050428	US 2003-680919	20031008
			JP 2002-296621	A 20021009
			JP 2002-296623	A 20021009
			JP 2002-350987	A 20021203
			JP 2002-350994	A 20021203
			JP 2002-350997	A 20021203
			JP 2002-158809	A 20030604

FAN 2004:490810

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
			JP 2002-350987	A 20021203
			JP 2002-350997	A 20021203
JP 2004182643	A2	20040702	JP 2002-350987	20021203
JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004182644	A2	20040702	JP 2002-350994	20021203
US 2005090686	A1	20050428	US 2003-680919	20031008
			JP 2002-296621	A 20021009
			JP 2002-296623	A 20021009
			JP 2002-350987	A 20021203
			JP 2002-350994	A 20021203
			JP 2002-350997	A 20021203
			JP 2002-158809	A 20030604

AB The present invention provides a process for more efficiently producing an α -hydroxycarboxylic acid ester (e.g., glycolic acid Me ester) wherein side reactions due to the α -hydroxycarboxylic acid ester are inhibited or prevented in comparison with prior art production processes. The process comprises steps of: (1) reacting, in the presence of oxygen, (i) a 1,2-diol (e.g., ethylene glycol) with a 1,2-diol or (ii) a 1,2-diol with an alc. (MeOH) to obtain a reaction product containing an α -hydroxycarboxylic acid ester, (2) separating the α -hydroxycarboxylic acid ester from the reaction product obtained in (1) by distillation under reduced pressure, and (3) feeding step 1 with a mixture obtained by partially or entirely removing water from the reaction product, wherein the mixture contains an unreacted 1,2-diol and/or alc.

L11 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method for stabilization of glycolic acid ester
 AN 2004:588210 CAPLUS
 DN 141:124117
 TI Method for stabilization of glycolic acid ester
 IN Yoshida, Hiroshi; Nakagawa, Satoshi
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004203743	A2	20040722	JP 2002-351003	20021203
				JP 2002-321286	A 20021105

OS MARPAT 141:124117

AB In the title method for stabilization of glycolic acid ester (e.g., **Me glycolate**) containing ≥ 1 mol% water (relative to said ester), the amount of alc. ROH (e.g., methanol) corresponding to the ester group CO₂R (R = organic residue) is adjusted so that the alc./water mol ratio in said glycolic acid ester is ≥ 0.3 . This invention protects the storage stability of the title ester. The title ester is a raw material for synthetic resins.

L11 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Manufacture of α -hydroxy carboxylic acid esters from diols, alcohols, and oxygen

AN 2004:529723 CAPLUS

DN 141:72027

TI Manufacture of α -hydroxy carboxylic acid esters from diols, alcohols, and oxygen

IN Baba, Hideyuki; Hayashi, Toshio; Yoshida, Hiroshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182650	A2	20040702	JP 2002-351602	20021203
				JP 2002-351602	20021203

AB Title esters, useful as monomers for poly(glycolic acids), are manufactured by reaction of 1,2-diols with primary alcs. and O in the presence of supported metal catalysts and acid catalysts. Thus, ethylene glycol and MeOH were treated with O in the presence of Au/TiO₂-SiO₂ catalyst for 240 min to give a reaction mixture containing 14.2% **Me glycolate** (I) and 1.4% 2-hydroxyethyl glycolate (II), which was treated with p-MeC₆H₄SO₃H at 90° under 2 kg/cm² for 2 h to give a reaction mixture containing 14.7% I and 0.5% II.

L11 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Use of bottom liquid of glycolic acid ester distillation tower

AN 2004:529719 CAPLUS

DN 141:89508

TI Use of bottom liquid of glycolic acid ester distillation tower

IN Yoshida, Hiroshi; Nakagawa, Satoshi; Inagaki, Takahiro

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203

JP 2002-350994 A 20021203
 JP 2002-350997 A 20021203
 JP 2002-158809 A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:351616

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2005:371052

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

AB In the process for manufacturing glycolic acid ester comprising (a) the synthesis of glycolic acid ester (e.g., by reaction of ethylene glycol with methanol in the presence of oxygen) and (b) the distillation of glycolic acid ester, the bottom liquid (of the distillation tower) (obtained in the distillation

step) containing the glycolic acid ester oligomers is recycled to step (a) or (b). This invention reduces wastes in the manufacture of glycolic acid esters.

L11 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of carboxylic acid esters from alcohols using supported noble metal catalysts and basic compounds, and regeneration of the catalysts

AN 2004:391235 CAPLUS

DN 140:356953

TI Preparation of carboxylic acid esters from alcohols using supported noble metal catalysts and basic compounds, and regeneration of the catalysts

IN Inagaki, Takahiro; Hayashi, Toshio

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004137180	A2	20040513	JP 2002-302258	20021016
				JP 2002-302258	20021016

AB Carboxylic acid esters are prepared by reacting ≥ 1 alcs. with O_2 in the presence of supported noble metal catalysts and basic compds. to suppress time-dependent deterioration of the catalysts. The catalysts used in the reaction are washed with solns. containing basic compds. for regeneration. A mixture of ethylene glycol, MeOH, and Au/TiO₂/SiO₂ was autoclaved with N₂ and O₂ at 100° for 4 h to give 68% **Me glycolate** (I). The catalyst was regenerated by washing with MeOH and drying. Yield of I in reaction using the regenerated catalyst and NaOH was 58% even after 5-time regeneration, vs. 31% for a control reaction without NaOH.

L11 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for manufacture of α -hydroxycarboxylic acid ester

AN 2004:354284 CAPLUS

DN 140:375670

TI Process for manufacture of α -hydroxycarboxylic acid ester

IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131410	A2	20040430	JP 2002-296636	20021009
				JP 2002-296636	20021009

AB In the manufacture of α -hydroxycarboxylic acid ester by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the reaction product is distilled; the pH of said reaction product is adjusted to 5 - 9 before distillation, or the pH in the distillation system is adjusted to 5 - 9. The title process is highly efficient.

L11 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for purification and manufacture of glycolic acid ester

AN 2004:351617 CAPLUS

DN 140:375669

TI Process for purification and manufacture of glycolic acid ester

IN Yoshida, Hiroshi; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131411	A2	20040430	JP 2002-296643	20021009
				JP 2002-296643	20021009

OS MARPAT 140:375669

AB The process for distillation of a mixture containing glycolic acid ester is done while
an alc. is supplied to the distillation system; said alc. (ROH) corresponds to CO₂R [R = hydrocarbon] of said ester. In the manufacture of glycolic acid ester from ethylene glycol or ethylene glycol and an alc. in the presence of oxygen, the reaction product mixture is distilled; the distillation of said mixture
is done as described above. The title process is highly efficient and inhibits the formation of byproducts.

L11 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

AN 2004:351616 CAPLUS

DN 140:375668

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei; Kitada, Ritsuo; Kakimoto, Yukihiro

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS,				

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
 TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

				JP 2002-350987	A	20021203
				JP 2002-350997	A	20021203
	JP 2004182643	A2	20040702	JP 2002-350987		20021203
	JP 2004182645	A2	20040702	JP 2002-350997		20021203

FAN	2004:529719					
	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
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PI	JP 2004182644	A2	20040702	JP 2002-350994		20021203
	US 2005090686	A1	20050428	US 2003-680919		20031008
				JP 2002-296621	A	20021009
				JP 2002-296623	A	20021009
				JP 2002-350987	A	20021203
				JP 2002-350994	A	20021203
				JP 2002-350997	A	20021203
				JP 2002-158809	A	20030604

FAN	2005:371052					
	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
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PI	US 2005090686	A1	20050428	US 2003-680919		20031008
				JP 2002-296621	A	20021009
				JP 2002-296623	A	20021009
				JP 2002-350987	A	20021203
				JP 2002-350994	A	20021203
				JP 2002-350997	A	20021203
				JP 2002-158809	A	20030604
	JP 2004131408	A2	20040430	JP 2002-296621		20021009
	JP 2004131409	A2	20040430	JP 2002-296623		20021009
	JP 2004182643	A2	20040702	JP 2002-350987		20021203
	JP 2004182644	A2	20040702	JP 2002-350994		20021203
	JP 2004182645	A2	20040702	JP 2002-350997		20021203

AB In the manufacture of α -hydroxycarboxylic acid ester (I) by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of oxygen, the liquid containing the reaction product is distilled, and I

is collected ; in the distillation of the liquid containing the reaction product, said

liquid is made into a thin film which is heated by contact with the heating surface. In the method for purification of the title compound by distillation, the

mixture to be distilled is made into a thin film which is heated by contact with the heating surface. **Me glycolate** with 98% purity was obtained by the title methods.

L11 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for purification and manufacture of glycolic acid ester

AN 2004:351615 CAPLUS

DN 140:375667

TI Methods for purification and manufacture of glycolic acid ester

IN Yoshida, Hiroshi; Umehara, Kohei

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
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PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:

FAN 2004:351616

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2005:371052

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203

JP 2004182644 A2 20040702 JP 2002-350994 20021203
 JP 2004182645 A2 20040702 JP 2002-350997 20021203
 AB In the method for purification of glycolic acid ester by distillation of a
 mixture
 containing glycolic acid ester (I), one or more components having b.ps. lower
 than that of I, one or more components having b.ps. higher than that of I,
 the fraction containing I is collected by the side cut system. In the
 manufacture
 of glycolic acid ester from ethylene glycol or ethylene glycol and an alc.
 in the presence of oxygen, the reaction product mixture is distilled; in the
 distillation of said mixture, the fraction containing I is collected by the
 side cut
 system.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	128.59	138.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-12.41	-12.41

SESSION WILL BE HELD FOR 60 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 12:39:41 ON 01 AUG 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
 SESSION RESUMED IN FILE 'CAPLUS' AT 13:00:34 ON 01 AUG 2005
 FILE 'CAPLUS' ENTERED AT 13:00:34 ON 01 AUG 2005
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	128.59	138.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-12.41	-12.41

=> d his

(FILE 'HOME' ENTERED AT 12:16:20 ON 01 AUG 2005)

FILE 'REGISTRY' ENTERED AT 12:25:51 ON 01 AUG 2005

 E ETHYLEN GLYCOL/CN
 E ETHYLENE GLYCOL/CN
 L1 1 E3
 E POLYGLYCOLIC ACID/CN
 L2 1 E3

FILE 'CAPLUS' ENTERED AT 12:26:59 ON 01 AUG 2005

L3 43868 L1

L4 2302 L2
L5 8922 L1/RCT
L6 216 L2/PREP
L7 3 L5 AND L6
L8 50 ALKYL GLYCOLATE
L9 7 ALKYLGLYCOLATE
L10 396 METHYL GLYCOLATE
L11 23 L5 AND L10
L12 1 L5(L) L10

=> ?glycolate

L13 15427 ?GLYCOLATE

=> 15 and 113

L14 152 L5 AND L13

=> gold

212223 GOLD

79 GOLDS

L15 212238 GOLD

(GOLD OR GOLDS)

=> 114 and 115

L16 26 L14 AND L15

=> oxygen

684711 OXYGEN

6593 OXYGENS

L17 689314 OXYGEN

(OXYGEN OR OXYGENS)

=> 116 and 117

L18 10 L16 AND L17

=> d 118 1-10 ti

L18 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Hydroxy-terminated α -hydroxycarboxylic acid condensates with high molecular weight and preparation thereof

L18 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method for stabilization of glycolic acid ester

L18 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Manufacture of α -hydroxy carboxylic acid esters from diols, alcohols, and **oxygen**

L18 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Use of bottom liquid of glycolic acid ester distillation tower

L18 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for manufacture of α -hydroxycarboxylic acid ester

L18 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Process for purification and manufacture of glycolic acid ester

L18 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester

L18 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for purification and manufacture of glycolic acid ester

L18 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification of glycolic acid and derivatives thereof

L18 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalysts for carboxylic ester production and processes for producing carboxylic esters

=> d 118 6,7 ti fbib abs

L18 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for purification and manufacture of glycolic acid ester
AN 2004:351617 CAPLUS
DN 140:375669
TI Process for purification and manufacture of glycolic acid ester
IN Yoshida, Hiroshi; Umehara, Kohei
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2004131411	A2	20040430	JP 2002-296643	20021009
				JP 2002-296643	20021009

OS MARPAT 140:375669
AB The process for distillation of a mixture containing glycolic acid ester is done while
an alc. is supplied to the distillation system; said alc. (ROH) corresponds to CO₂R [R = hydrocarbon] of said ester. In the manufacture of glycolic acid ester from ethylene glycol or ethylene glycol and an alc. in the presence of **oxygen**, the reaction product mixture is distilled; the distillation of said mixture is done as described above. The title process is highly efficient and inhibits the formation of byproducts.

L18 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester
AN 2004:351616 CAPLUS
DN 140:375668
TI Methods for manufacture and purification of α -hydroxycarboxylic acid ester
IN Yoshida, Hiroshi; Nakagawa, Satoshi; Baba, Hideyuki; Umehara, Kohei; Kitada, Ritsuo; Kakimoto, Yukihiro
PA Nippon Shokubai Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

PATENT FAMILY INFORMATION:
FAN 2004:351615

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2004:490810

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050600	A1	20040617	WO 2003-JP12934	20031009
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2002-350987	A 20021203
				JP 2002-350997	A 20021203
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

FAN 2004:529719

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604

FAN 2005:371052

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005090686	A1	20050428	US 2003-680919	20031008
				JP 2002-296621	A 20021009
				JP 2002-296623	A 20021009
				JP 2002-350987	A 20021203
				JP 2002-350994	A 20021203
				JP 2002-350997	A 20021203
				JP 2002-158809	A 20030604
	JP 2004131408	A2	20040430	JP 2002-296621	20021009
	JP 2004131409	A2	20040430	JP 2002-296623	20021009
	JP 2004182643	A2	20040702	JP 2002-350987	20021203
	JP 2004182644	A2	20040702	JP 2002-350994	20021203
	JP 2004182645	A2	20040702	JP 2002-350997	20021203

AB In the manufacture of α -hydroxycarboxylic acid ester (I) by (1) reaction of 1,2-diol with 1,2-diol or (2) reaction of 1,2-diol with an alc. in the presence of **oxygen**, the liquid containing the reaction product is distilled, and I is collected ; in the distillation of the liquid containing the reaction product, said liquid is made into a thin film which is heated by contact with the heating surface. In the method for purification of the title compound by distillation, the mixture to be distilled is made into a thin film which is heated

by contact with the heating surface. Me glycolate with 98%
purity was obtained by the title methods.

=> l18 not l11

L19 1 L18 NOT L11

=> d 119

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:1125570 CAPLUS

DN 142:56870

TI Hydroxy-terminated α -hydroxycarboxylic acid condensates with high
molecular weight and preparation thereof

IN Tsuneki, Hideaki; Yoshida, Hiroshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2004359785	A2	20041224	JP 2003-158809	20030604
PRAI	JP 2003-158809		20030604		

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:hold

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
154.01	164.28

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-13.87	-13.87

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:05:27 ON 01 AUG 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *

SESSION RESUMED IN FILE 'CAPLUS' AT 13:21:28 ON 01 AUG 2005

FILE 'CAPLUS' ENTERED AT 13:21:28 ON 01 AUG 2005

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
154.01	164.28

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-13.87	-13.87

CA SUBSCRIBER PRICE

=> save temp all dioloxidsrch/l
L# LIST L1-L19 HAS BEEN SAVED AS 'DIOLOXIDSRCH/L'

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

154.91

165.18

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-13.87

-13.87

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:22:25 ON 01 AUG 2005